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EDITORIAL

PROFESSION OR CONFESSION?

BEN W. MILLER
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Do we have a real profession which we can proudly claim or will we have a confession of failure to make humbly in the peace following the war?

For a long while our field and the world got along well by reason of the fact that our field was an inconspicuous and ignored baby of the educational family. We improved the old theories and invented new ones. Some critics have said that if our diagnosis was excellent, then our therapy seems somehow to have gone astray. Others decided that our field was a trifle cranky but needed only a little tinkering to make it perfect. The majority did not bother themselves to express an opinion.

In our inventory of the field let us not provoke the ironic inextinguishable laughter of the gods. Physical education holds no secret for rescuing this sick old world of ours from the humiliation and disillusionment that nowadays threatens to overwhelm it. We have no secret. There is only a recognition of the fact that the captaincy of man's health and well being, like the kingdom of God, must be sought within him and our field has the responsibility, as has long been true, to help him find the way. In doing this our field is frequently characterized as a diamond in the rough. But the reminder is given that most people prefer that their own diamonds be cut and polished.

What we hope to do is to strike from our field all shackles of outworn philosophies and creeds, "superstitions", pet and exaggerated diversions, and conventions. We want to add fact unto fact until the field can be liberated through knowledge and foresight. Time is fleeting and the emergency demands that the field must take thought how to help people achieve in a most pragmatic and utilitarian society. However, in this materialistic and mechanistic universe there is plenty of room for the intangibles. Knowledge and reason should not cast down all else to enthrone the trinity of Reason, Research and Realism. The field has passed out of that limited stage of development. There should be no quarrel of tangibles versus the intangibles in physical education. If the field is to do its part and survive, the controversies of the either-or philosophy, the old or the new, the traditional or the progressive, must be compromised and welded instead of picked to pieces and sown for discontent, misunderstanding and inefficiency.

The informed American public knows that the need for increased effort in promoting fitness is not some sort of beautiful utopian ideal that has little connection with efficiency, speed of training, and morale. Army and navy leaders have repeatedly emphasized its value. It cannot be said that physical educators working close to the subject, with whole interest and energy bound up in that subject, have lost their perspective. There is much positive proof that the health of physical educators of this country are well aware of the renewed and greater importance of their work in the battle to defend America and the things for which it stands. Health and physical educators have not characteristically shown complacency and indifference in regard to the health of the American public. They have known that the seriousness of the health situation is no worse now than it has been. The only difference is that more people have recognized the seriousness and associated it with a common and worthy effort. Even yet it is unfortunately better known to people in the field than it is to most other Americans. They who have worked, talked, lived, and breathed the problem have known that a real and vital problem existed. Health and physical educators have often made recommendations to guide and safeguard public health, but they have not always been heeded. Rather than judge the field too severely one can partially blame the general apathy of many groups who have been oblivious to errors and to their sense of duty and responsibility.

However, the easy and much less fruitful procedure is to blame others. That is the Axis system which believes in the axion "divide and conquer". It is through such organizations as ours as the unifying vehicle for the profession that our field can help unite and conquer. The field is full of energy, intelligence and ambition, and possesses those qualities which can surmount difficulties and obstacles. Trials to establish war guilt, if any, should find physical education the accuser rather than the accused.

Our Association is an instrumentality with broad, quick tie-ins within the field that can accomplish things no single person could do. It is bigger than any one small group because it holds in its hands the solemn pledge of the many.

Let us examine how we can best go about fulfilling that charge.

First is acceptance of a well defined responsibility to prepare youth to be fit in the broadest sense of the term but with special emphasis on physical fitness as our unique task. Let us benefit by any mistakes we have made and forget any fine compliments the world has paid our field in the past. Let us weigh our definite responsibility today.

Second is the actual fulfillment of our responsibility to a degree even more than is generally expected since there is no prize for second place. As educators we are not to smash fitness down the throats of youth with a sledgehammer. That is the fascist way of achieving efficiency—severe punishment on failure to do what is expected, punishment not limited to reprimand but extended to discharge, concentration camp or worse. We cannot employ Hitler's measures in an educational set-up in combatting our particular problem. Our tools are largely education, example, and appeal to the patriotism and moral obligation of the individual. Force has a very limited value. We can only lead youth in the way in which they should go.

Physical education has this grand opportunity to help lift American youth above the anxieties which everywhere press in upon people of goodwill. Physical education must mobilize its nationwide resources in leading a concerted and intensified campaign against the existing health problem. Health and physical educators tread among the grave markers of their own soldier dead when they walk among those physically unprepared for service and do nothing about it.

We cannot approach reality and *be* that profession about which we have dreamed without creating or reproducing it for ourselves. In the process of making reality we become real ourselves.

The real profession is the true one, against which we check the unreal—the false and the incomplete. With this premise we have a reliable check on the closeness of our approach to a real profession or to a fad or frill.

Will physical education survive after this emergency a bigger and stronger profession or will it be rocking on its heels ready for a knock-out blow? Can physical education master its strength, new skills, individual advice and composite brains to help give a solid front to the world? Definitely yes, but noble pledges do not win wars. It takes action. More prayers will have to be made on shoe leather rather than on knee caps or gluteals!

In doing our share to exemplify a real profession we should ask ourselves the following questions:

1. Do we truly realize that this is not a phoney war and that we have no phoney task?
2. Are any of us confused by conflicting statements regardless of the sources from which they have emanated? Do any of us give this as an excuse to not do what we as trained physical educators know is our duty?
3. Are we disposed to believe what we would like to believe? Could we rightfully be accused of wishful thinking?
4. Are we emphasizing the conservation of manpower as a factor in national defense and the fact that time is necessary to develop fitness even though we no longer have inexhaustible reserves of time at our disposal?
5. Do we reiterate again and again the so-called "hidden costs" of physical insufficiency which are far greater than the obvious, easily discernible costs?
6. Have we expanded our programs until they influence people in other places than within the four walls of the gymnasium?
7. Do we emphasize the promotion of efficiency since increased fitness always results in increased efficiency, increased production, and better morale?
8. Have we expanded our efforts and our viewpoint even if they reach only within our separate spheres of influence?
9. Since the forces which create health problems are active twenty-four hours a day, have we made efforts which are varied and adequate and go on twenty-four hours a day to combat them?
10. Are all of us performing a public service in our field by taking critical inventory of our programs, not crying "wolf", and digging in more and more to help eliminate at least our local problems?
11. Will our field be partially responsible if boys are asked to march away to war sooner and if they will stay to fight longer?

A prediction is in order if we utilize the profession which we can proudly claim instead of having a confession of failure to make humbly.

The field has always responded when called upon. So much of the future of our country depends upon the field that it will meet the challenge with determination and fortitude and will prove a credit to the educational family, our programs will become as indispensable in peace as in war.

Our Association can and will cooperate and exemplify the principles of unity in dependence and independence in unity. We have a diamond and we will help to cut and polish it!

The payoff will be the highest in the history of the field, if we earn it. The payoff will comprise all the things the field has demanded. Besides in being a real profession we will be making our essential contribution to the total war effort.

SOMETHING FOR WHICH TO KEEP FIT

JAY B. NASH
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Health, Physical Education and
Recreation

If individuals young and old are really to keep themselves fit, they must have an incentive. Health, or physical fitness as we are inclined to say during war time, is not really an objective in and of itself. It is basic to serving a purpose. We use physical fitness to attain some objective. It is not the fitness itself that is the end; it is the use to which it is put. Therefore, to give physical fitness qualitative characteristics, we must consider that for which it is to be used.

What are the incentives in our profession? For a limited number we have seen that excellency of performance in sports and games serves as a motive. Men, and oftentimes women, have trained specifically to be able to compete better. There has been a self-discipline under the impetus of a qualitative end. To a limited number the ability to engage in vigorous and joyous recreation has become an incentive. Men keep themselves fit to enjoy a vigorous game of golf or tennis or for the portage of a canoe. Others want to keep young with their children. Still others feel the importance of their work and the desire for excellency gives them a worthy objective. All of these combined, however, still fall short of a national ideal for the masses.

In this whole problem of physical fitness, we may think in terms of what is called a "physiological limit." The armed forces are calling for muscular strength, agility, speed, flexibility, explosive power, balance, posture and heart power. These are all admirable qualities and must be developed not only for men in the front lines but for those who are on the assembly lines and on the home front. Speaking physiologically, there is a limit to development in the various categories mentioned above. Fatigue sets in. The individual no longer responds; he reaches a limit.

We have sometimes forgotten that the "psychological limit" is well above the physiological. If there are real incentives, if there is enthusiasm, if the will-to-do of a fighting spirit can be developed, the boy somehow taps reserves and does accomplish more. This psychological limit is achieved by the use of incentives. The psychologist, William James, calls attention to the tired kindergarten class a mile from home; when given pickets to ride, the children pranced along on their make-believe steeds. Parents have difficulty keeping up with small children on the way to the merry-go-round and yet, only a few moments later, groan under the burden of carrying them back, as the infant repeats, "Daddy, my little legs are *so* tired." But turn around and go back to the merry-go-round and fatigue vanishes. We have seen athletic teams do the impossible when there are incentives. Athletes and mountain climbers "hang on" when there seems to be nothing in them except the "will which says to them, 'hang on'."

On the East we are witnessing a nation which has developed but one secret weapon; *the weapon of creating enthusiasm and tapping emotions.* True, this has been done under the impetus of hate, revenge and fear. But this has been balanced by effective propaganda to the effect that they are chosen people, designated for world leadership. This incentive to strive has developed, as biographers on the fall of France have said, "Wings and Fire."

On the West we have a nation which for years preached to the little man that he is a direct descendant of the gods. Eighty million people share this faith and the belief that the "Emperor" is the Son of Heaven. The roots of this incentive go back to the early classroom, inspired by stories of supreme sacrifice and devotion. They have a motto—"Remember that death is lighter than a feather; but duty is heavier than a mountain." Incredible things have been done. Even on maneuvers men have covered over one hundred and twenty miles in seventy-two hours. They have carried heavy packs, a rifle and a hundred rounds of ammunition and have come in on double-time. Seventy-two hours with four hours of sleep—this represents a psychological limit way beyond any physiological level. These are the men who went down through "jungles which were impenetrable."

Little men in London with about one out of seven homes bombed, shook their fists toward the sky and breathed a defiance. They achieved the psychological limit which was the turning point in the war.

Youth of the Volga and the Don placed their feet on the home land in the city named for their leader and chose to die rather than give up. In these efforts the level achieved has no physiological explanation.

What can we use for incentives? What have we to fight for? What have we that will create enthusiasm and tap body reserves so that we may reach a psychological limit of endeavor essential for Victory?

We have everything; we have the land which our forefathers wrested from the wilderness; we

have a nation which has for over a hundred years lived under the greatest human document ever written—the Bill of Rights. We are having a part in one of the greatest experiments that the world has ever seen on a large scale—an experiment which has as its foundation the respect and personality of *all men,* and freedom of opportunity. We have a chance to obey self-imposed laws and be free rather than to have the yoke of a slave clamped upon us.

This ideal of freedom includes the little people of the world everywhere. We are now on seven seas and five continents, fighting so that little children may have a right to the good things in life, that they may sleep in their own rooms and that they may put a light in the window.

Here is our incentive to keep fit. It will give us the adrenalinization to reach a psychological level of effort for victory.

PHYSICAL FITNESS AND THE SCHOOLS

C. O. JACKSON
University of Illinois

"Youth must be tough!" "Let's teach them to slit throats, hit below the belt, gouge eyes as well as their opponents can . . .!" "Teach them to welcome violence . . . deluge them to the point where they are contemptuous of it . . .!" "Toughen them mentally!" These, and similar statements from a commencement address in the east, were widely printed throughout the United States, and even read into the Congressional Record. The speaker went on to say that our physical education and athletic programs were hopelessly inadequate, and that we must change our emphasis completely.

If we believed in the thesis expounded above, we would throw out everything in the physical curriculum and substitute nothing for it but endurance runs, "dirty" fighting, and conditioning for killing! In Germany, such training begins at the age of ten, in Japan, even earlier, with every experience in the lives of these youths directed toward this end. Such education has been most successful, in terms of countries overrun, and a well-deserved reputation for cruelty, violence, and destruction not equalled since the days of Attila.

Is this what we want for the youth in our schools? Take a good look at team spirit, sportsmanship, school morale, in fact the entire school curriculum and see what would happen if we attempted to translate such ideas into action! The resulting tragedy, terrible as it seems, would be submerged in another even worse, the destruction of democracy! There must be another way open, one more compatible with our democratic ideals.

Perhaps the wisest thing to do, as an immediate step, is to study the trends and recommendations by the authorities in the field of physical education. In a survey made by the writer in April, information was secured from the state directors of physical education in six mid-western states. Among the questions asked was, "What recommendations are you making for improving the program in physical education in your state at the present time?"

Indiana reports stress on more time, more intramurals, more equipment, more and better administration, more effective teaching, everyone in some activity, and closer cooperation with the home. Wisconsin is emphasizing Keep-Fit clubs, and there is a movement sponsored by the state department to bring about the creation of a curriculum committee to devise a long-time curriculum for the state. West Virginia mentions more emphasis than ever before on physical education, along with stricter enforcement of the standards in this area.

In Missouri, recommendations are that time allotment for an adequate program during the school day be provided, greater emphasis placed on intramurals with perhaps less on interscholastic athletics, and more attention than before to the health and the development of the individual. Ohio is engaged in studies and surveys to determine the needs and the best way of meeting them. Our own state director recommends a complete expansion of the program, from the elementary grades through the high school, with emphasis on vigorous activities, and the addition of Keep-Fit clubs, as an extra curricular activity for all pupils.

It would appear that those best qualified in the field of physical education and athletics are primarily concerned with two points of emphasis; first, more vigorous and far-reaching programs, and second, more time and opportunity for pursuing such a program. A broad, comprehensive program of physical education, including sane emphasis on interscholastic athletics, which met the needs, interests, and capacities of individuals yesterday, is just as valuable today, in war time, and will make an equal contribution tomorrow when peace comes.

Let's not be stampeded into giving up those values which we know are inherent in such a curriculum, and substituting unknowns! We must have more vigorous sports, more combatives, more cross-country running and obstacle racing, all under trained leadership, but not as the entire program. Such conditioning can make significant con-

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tributions, but only if they are a means to physical fitness which may lead to greater efficiency in the performance of *many* worthwhile activities.

Conditioning a man for active participation in war is surely different from educating high school boys for the immediate and future challenges which they must face. The Navy has gone on record as insisting that "a cadet start as a gentlemen, and remain so" but at the same time he is being conditioned physically and mentally for the task at hand. Undoubtedly, the emphasis in various branches of our armed forces must of necessity, be on the toughening, rough-and-tumble, survival-of-the-fittest type of activity, but this surely is no sane reason for throwing away our entire philosophy of physical education for high school boys and substituting just another phase of totalitarian life!

When we take stock of the situation in our own schools we find that physical education has meant only athletics for the superior few, and that our class activity program has been given little thought, time or emphasis, then let's do something about it, TODAY! The tire shortage will undoubtedly bring about curtailment of interscholastic athletics, both in number of games and in length of trips, with the resulting emphasis on greatly-expanded programs of intramurals. 'Athletics for all' must, of course, consist of a great deal more than basketball, and will be best promoted as the laboratory outgrowth of the instructional program in physical education. The in-school activity program must be intensified and broadened, with additional time allotment and increased facilities and equipment as essentials. In either case, a complete health examination and followup should be the first prerequisite for every pupil enrolled in the schools.

With the shortage of trained instructors and coaches, it will probably be necessary to canvas the faculty and make use of many who have temporarily "retired" from such duties. In other cases, persons who are not well-trained in the area of health and physical education, but who are interested, may have to serve. Expert advice may be secured from the department of public instruction, the teachers colleges, and the university, who are anxious and willing to help re-evaluate and strengthen your entire program.

As educators, our all-around contribution to the total war-effort will only be worthwhile as we consider the needs of all students, both boys and girls, and provide a worthwhile, many-sided and well-balanced curriculum for them. Health and physical fitness are important objectives of education and deserve greater emphasis than ever before.

SAFETY ON ICE

VINCENT FARRELL
Recreation Director, West Side High School
Newark, New Jersey

Each winter many millions of folks look forward to the regular visit Jack Frost pays to the northern half of these United States. For that call will leave behind clear, cold, white, sparkling ice, and once again, sports on the frozen solid crystalline surface will become the current rage. Hordes of Americans, as you and I equipped with skates, will leave their warm homes to seek the frozen streams, ponds, lakes and rivers, over which King Winter has waved his scepter.

This call comes to young and old alike, for skating is not necessarily a young person's sport. While older people are not always physically capable of the more spectacular pirouettes or high speed tests, they can safely enjoy the thrill of just plain gliding. The desirable results received from participation in this wholesome form of recreation are many. But if one is to get the healthful benefits and enjoy to the fullest one of our most popular winter pastimes, it is important that he become acquainted with the pitfalls as well. The most dangerous hazard, is that of a skater breaking through the ice. Following a few simple rules will eliminate many accidents.

Never skate alone as there would be no one to come to your aid if something did go wrong. A trivial accident can result in fatal exposure, if you are not found quickly.

If your party is skating on some isolated or unfamiliar spot, cut a hole in the ice a few feet from shore and be certain that the ice is at least three inches thick.

Make certain that there are no strong currents or springs under the ice in the area you are using. In such places the ice generally is thin and too weak to support the skaters. If you should come across an unmarked danger spot, mark it plainly so that others will see it.

As a safety measure, a rope which is strong enough to hold two or more persons should be kept available in case of an emergency. A long board or tree branch can be put to good use also.

If some one does break through the ice, do not run to the opening. In all probability, the ice would give way with you, too. In emergencies such as this, fall flat on your stomach, then throw the rope, or extend a board to him and tell him to get a firm grip on this object. When this is

done, pull him out of the water. If several persons are aiding in the rescue, order them to lie on their stomachs and to grasp one another's limbs. In this manner a human chain can be formed and the rescue quickly effected.

As soon as you have the victim up on the ice, slowly begin to crawl back to the shore. Warn him not to stand up, but to follow your example of crawling in worm-like fashion. The weight is being better distributed on the ice in this manner. Once on shore, wrap the rescued person in warm blankets or clothing as soon as possible. Then get him to a heated room and remove the wet clothing he is wearing. Next place him in bed, covering him with blankets. Give him a hot drink or stimulant and send for a doctor.

As for other safety steps, always skate under control. When you feel you are losing control, stop. If the rink is crowded, obey simple traffic rules as if you were on a street.

At all times keep your eyes open; be aware of sticks or stones that may be frozen on the top of the surface of the ice. This caution is especially necessary at night when visibility is poorer than in daylight.

If there are many people on the ice, avoid such plays as tag or cracking-the-whip. An unexpected crash may spoil someone's fun and result in an injury as well. If hockey is your game make sure you are wearing the proper equipment especially *regulation hockey skates*. Above all else, make sure you are dressed warmly enough. An improvised vest made of newspapers will work wonders. Make sure you have an extra jacket to put on when you are through skating.

So fellow snowbirds, as we try the fancy twists and turns, a-la-Sonja Henie on the silver blades, let us make the most important figure—Safety on Ice.

TRAINING PRACTICES OF PROFESSIONAL FOOTBALL COACHES, TRAINERS AND PLAYERS

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The data used in study were secured from the compilation of the findings of 58 returned questionnaires relating to diet and practice, from coaches, trainers, and professional football players of the United States and a study of the many supplementary remarks included on the returned questionnaires. Conclusions were made from the compiled results.

The traditional belief that some special type of training gave the best results in athletic participation still persisted even through the late 1920's, and is evident by the questions regarding the diet that confronted athletes of that era.

In data obtained from the various athletes, some very distinct trends are noticed in the direction of a more moderate indulgence in all of the normal dietary necessities of life, rather than following some strict training schedule in the hope of being endowed with mysterious physical powers.

Table I shows the extent to which meat and eggs were recommended in the training diet as compiled from the various questionnaires returned by the professional football coaches, trainers and players.

The significant value of the chart is really brought forward when the gradations are divided into but two separate groups. Placing 0-1-2 into one column, as those not recommended, or negative, and columns 3-4-5 into another column, as those recommended, or positive, some decidedly comprehensive results became apparent.

TABLE I. MEAT AND EGGS RECOMMENDED OR REJECTED IN TRAINING DIET

	*0	1	2	3	4	5
Beef	0	1	14	34	12	1
Cold Meat	1	29	21	5	0	0
Lamb	1	20	18	12	3	0
Pork	3	27	18	5	2	0
Mutton	3	20	15	7	0	0
Ham	2	15	24	13	1	0
Bacon	0	12	25	14	1	1
Veal	1	11	26	14	2	2
Eggs, Soft Boiled	3	10	21	14	4	2
Eggs, Hard Boiled	8	17	13	9	2	0
Eggs, Scrambled	0	10	27	17	2	1
Eggs, Poached	2	13	18	10	3	2
Eggs, Fried	6	20	14	5	0	0
Eggs, Shirred	7	11	10	7	0	0
Eggs, Curried	10	11	9	5	1	1

*0—Never recommended.
1—Very seldom recommended.
2—Infrequently recommended.
3—Fairly regularly recommended.
4—Frequently recommended.
5—Habitually recommended.

Through a thorough study of the results it will be noticed that the use of eggs as a part of the regular training diet seems to favor their infrequent use. Among the meats presented for use or disuse as a part of the training diet, beef is dis-

tinctly favored and most highly recommended for the diet of professional football players. Other meats, it will be noticed, are favored only moderately.

Tables II and III, as follows, record the extent to which milk is recommended as a part of the training diet, and the quality preferred is also given consideration.

TABLE II. EXTENT WHICH MILK IS RECOMMENDED

0	1	2	3	4	5
0	0	2	12	19	21

TABLE III. QUALITY OF MILK RECOMMENDED

	0	1	2	3	4	5
Ordinary whole milk	0	0	4	14	20	16
High in fat content	4	3	7	9	2	6
Skimmed	9	12	6	2	2	2
Buttermilk	4	7	18	8	6	2

Using the same method of grouping and scales of recording as in Table I, it will be noticed that the figures reveal a decided preference for the use of whole milk as part of the regular training diet. Its value as a health-giving food has long been recognized, yet as widely accepted as milk is in any diet, one of the trainers says: "I advise one glass of milk with the evening meal and never with fish,"[1] and quoting a statement from another questionnaire: "I like a quart of buttermilk two or three times a week and in hot weather as often as once a day."[2]

Table IV tabulates the extent to which milk is included in the every-day diets of the professional football players in training. From the chart we learn that it is a very important food to be included in the diet; however, it is just as important that the amount and time should be watched. A very slight number believed in use of milk the day of the contest, but the largest percentage did vote in favor of milk during the week, every meal, and for morning and evening meals.

TABLE IV. PREFERRED TIME FOR DRINKING MILK

	Time Preferred	Not Preferred
Drink milk every day at every meal	16	16
Drink milk at evening meal	20	12
Drink milk at morning and evening meals	22	9
Drink milk at morning meal only	8	17
Drink milk just before a contest	8	35
Drink milk last two meals before contest	6	24
Drink milk in week before a contest	23	11

[1] George Mauch, Trainer, New York Giants.
[2] Mel Hein.

Table V presents the extent to which some important dairy products are used as a part of the training diet. The use of cheese in the diet of one training to be an athlete has little or no value. In stating the idea of one athletic trainer, I will go on and clarify the use of cheese in the diet. "Cheese is a good food, but seldom advised on athletic menu."[1]

Butter has been generally accepted as containing large quantities of food value for the training athlete and is highly recommended by both trainers and players as one of the habitual food requirements. This is shown by the results of tabulation on Table V.

TABLE V. USE OF CHEESE AND BUTTER IN TRAINING DIET

	0	1	2	3	4	5
Cheese, any kind	1	12	17	8	0	3
Mild Yellow Cheese	1	9	23	8	0	0
Limberger Cheese	8	19	6	1	0	0
Cottage Cheese	0	8	17	14	9	2
Strong Cheese	4	20	7	3	3	0
Butter	0	0	3	6	10	31

In Table VI, we find the time cheese is used in the diet of the training athlete. They nearly all agreed to the man that it should not be eaten the day of a contest, but could be eaten during the week and especially at the evening meal.

TABLE VI. TIME CHEESE IS USED IN DIET

	Time Preferred	Not Preferred
Eat cheese every meal every day	3	24
Eat cheese at morning and evening meal	4	16
Eat cheese at evening meal only	22	6
Eat cheese at morning meal only	3	19
Eat cheese just before a contest	5	22
Eat cheese meal before a contest	0	20
Eat cheese last two meals before a contest	3	22
Eat cheese the week before a contest	26	7

Table VII shows us that the greatest majority are habitual users of butter in the training diet, which should illustrate the point farther of the value of butter.

TABLE VII. EXTENT OF BUTTER USED IN TRAINING DIET

0	1	2	3	4	5
0	2	0	9	13	27

Table VIII presents all of the foods necessary for the training athlete to use from day to day in preparation for active competition, and again very distinct trends are noticed. The moderate usage of almost any of the foods presented for considera-

[1] Dave Woodward, Trainer, Green Bay Packers.

tion is favored by the many players, trainers, and coaches answering the questionnaires.

In quoting some of the remarks by different players, we notice varying responses of a few, while the majority follow the same principles.

"Never eat cereals the day of the contest."[1]

"Eat cereal anytime for breakfast."[2]

"I don't eat the day before a game, only drink coffee and orange juice."[3]

"Never eat vegetables the day of a game."[4]

TABLE VIII. FOOD PREFERENCE WITH REFERENCE TO TIME OF CONTEST

	A*	B	C	D	E	F
Cereals						
Corn Flakes	1	7	31	7	1	0
Post Toasties	3	7	26	6	1	0
Cream of Wheat	3	3	28	10	3	0
Grape Nuts	3	0	31	11	4	0
Rice Flakes	2	1	34	8	2	1
Wheat Krispies	2	3	28	9	1	0
Wheatena	1	7	25	10	3	0
Shredded Wheat	1	2	30	9	2	1
Oatmeal	3	4	34	10	2	0
Puffed Wheat	1	1	32	10	1	0
Puffed Rice	2	1	33	7	2	0
Ralston's Food	1	0	30	11	2	0
Desserts						
Pudding	2	1	19	7	11	4
Crackers (Sweet)	0	3	13	12	12	4
Cake	0	0	3	12	15	11
Pie	0	0	2	11	16	16
Jello	5	4	25	5	3	1
Gelatine	5	5	21	8	6	2
Ice Cream	5	7	25	4	5	1
Beverages						
Coffee	9	8	17	6	6	0
Tea	23	2	16	2	2	1
Soda Water	0	0	7	7	14	9
Beer	0	0	3	5	15	17
Liquors	0	0	1	4	8	23
Lemonades	0	1	12	10	11	7
Limeades	0	1	12	8	9	9
Fruit Juices	7	12	24	2	0	0
Breads						
Biscuits	0	2	7	12	17	7
Toast	32	2	17	0	1	0
Fresh loaf bread	1	1	18	7	12	6
Crackers	3	5	23	8	5	1
Meats and Dairy Products						
Bacon	2	5	24	5	8	3
Cheese	0	0	11	8	14	15
Nuts	0	0	5	9	14	17
Peanuts	0	0	3	9	12	20
Meat Soup	14	2	21	2	4	3
Ham	5	2	24	4	8	1
Pork	1	3	19	8	4	11
Lamb	8	5	28	1	6	1
Beef	18	10	21	0	1	0
Chicken	2	4	29	5	8	1
Turkey	2	2	27	5	7	2
Duck	2	2	25	7	10	0
Fish	0	1	21	10	9	4
Eggs	10	11	25	3	2	0
Fruits						
Apples	3	8	27	4	7	0
Oranges	9	8	26	1	3	0
Pears	1	5	26	5	8	0
Strawberries	1	3	24	9	6	1
Bananas	1	3	12	7	17	7
Grapefruit	7	9	29	2	1	0
Tangerines	2	6	29	4	4	1
Apricots	0	4	30	6	5	0
Plums	3	4	26	4	5	0
Orange Juice	13	10	22	1	1	0
Tomato Juice	7	11	27	1	1	0
Raisins	0	4	25	6	8	5
Prunes	1	10	26	5	4	1
Pineapples	1	3	26	6	8	0
Pineapple Juice	5	8	28	1	3	0
Grapes	0	4	25	5	6	4
Dates	0	2	20	8	12	2
Cherries	0	3	23	5	9	2
Peaches	1	4	30	4	6	0
Vegetables						
Carrots	6	4	35	3	1	0
Spinach	5	9	34	1	1	0
Cauliflower	3	3	33	2	6	1
Cabbage (boiled)	2	1	25	7	4	7
Cabbage (green)	2	2	20	8	7	7
Turnips	2	2	23	5	7	7
Lima Beans	3	2	31	6	6	1
Soy Beans	2	2	23	8	6	3
Black-eyed Peas	2	4	27	5	4	2
Lettuce	12	7	28	0	2	0
Squash	3	0	28	7	8	0
Irish Potatoes	14	5	25	1	3	0
Sweet Potatoes	5	2	20	8	11	0
Beets	3	3	35	3	4	0
Celery	5	4	33	3	2	0
Broccoli	4	1	32	4	3	1
Tomatoes	4	7	30	1	5	0
Green Peas	5	2	35	2	1	1
Cucumbers	2	0	12	7	11	13
Green Peppers	1	0	10	10	10	13

[1] Carl Littlefield.
[2] George Kase.
[3] Charlie Malone.
[4] Dale Burnett.

* Scale for Reading Responses

A—Especially preferred on the last meal before a contest.

B—Especially preferred on next to last meal before a contest.

C—Might be eaten in moderation at any time.

D—Should not be eaten the meal before a contest.

E—Should not be eaten on the day of a contest.

F—Should not be eaten for two days preceding a contest.

	A	B	C	D	E	F
Onions	1	1	14	8	9	8
Asparagus	4	3	29	4	4	1
Red Cabbage	2	1	21	7	8	7
Artichokes	2	1	17	8	11	5
Okra	2	0	17	10	9	7
Parsnips	2	3	19	6	9	6
String Beans	4	6	35	2	2	0
Egg Plant	2	2	18	8	13	2
Corn	2	3	25	6	10	1
Mushrooms	2	1	22	6	12	3
Vegetables Soup	11	5	27	2	3	0
Rice	3	1	23	6	12	1

Table IX shows the results offered for manner in which foods are prepared. There are varied opinions, but nearly all were against the use of fried foods in the training diet. Boiled, baked, and stewed seemed to be the favorite methods of most everyone.

TABLE IX. METHODS OF COOKING FOOD

Recommendation	0*	1	2	3	4	5
Boiled	0	14	5	13	8	9
Baked	0	8	20	7	13	4
Fried	3	15	8	2	0	15
Broiled	1	7	10	19	9	7
Stewed	2	2	8	11	17	6

* 0 = never, 1 = very seldom, 2 = infrequently, 3 = fairly regularly, 4 = frequently, 5 = habitually.

OPINIONS REGARDING THE TIME THE PREGAME MEAL SHOULD BE EATEN AND WHAT IT SHOULD CONSIST OF

Length of time Preceding Game	Number of Questionnaire	
2½ hours	1	Lamb chops or steak, hard toast, baked potatoes, tea, small amount of butter.
3½ hours	2	Steak, potato, butter, toast, coffee.
4 hours	3	Broth, broiled steak or lamb chops, boiled potato, green peas, tea, toast.
4 hours	4	Broiled steak, baked potatoes.
3½ to 4 hrs.	5	Consomme, steak, baked potatoes, buttered peas, toast, and tea.
3½ to 4 hrs.	6	Consomme, broiled steak, baked potato, peas, rolls, custard, tea.
3½ hours	7	Tea, toast, roast beef.
3½ hours	8	Orange juice, steak, mashed potatoes, peas, apple sauce, *milk, ice cream.*
3 hours	10	Broiled lamp chops, potatoes, tea, peas.
3 hours	11	Broiled steak, potatoes, peas, coffee, toast, ice cream.
3½ to 4 hrs.	12	Steak, baked potatoes, buttered toast, coffee.
4 hours	14	Steak, potato, tea.
4 hours	15	Steak, tea, potato, peas, toast.
4 hours	16	Steak, baked potato, tea, soft boiled or poached egg, orange juice.
4 hours	17	Steak, baked potato, tea or soft boiled egg, cereal, orange juice.
3 hours	18	Orange juice, dry toast, steak, 1 glass milk.
4 hours	19	Steak broiled, dry toast, string beans, coffee or tea.
3-4 hours	20	Orange juice, steak or ham and eggs, no drink.
	21	Beef, potato, peas, toast, tea orange juice.
3-4 hours	22	Rare broiled steak, baked potato, tea, toast.
4 hours	23	Orange juice, broiled steak, baked potato, dry toast, tea.
3-4 hours	24	Orange juice, oatmeal, steak, toast, etc.
2½ hours	25	Tea, toast, custard.
4 hours	26	Broiled steak, baked potato, string beans, coffee or tea.
4½ hours	27	Steak, baked potato, toast, tea.
3 hours	28	Steak, potato, orange juice, toast, string beans.
4 hours	30	Orange juice, broiled steak, glass of milk or hot chocolate.
3 hours	31	Fruit juice, tea, ham and eggs, toast, butter.
4 hours	32	Orange juice, two scrambled eggs, coffee.
3 hours	33	Poached egg on toast, tea, or small steak and potato.
3 hours	34	Soup, beef, baked potato, vegetable, toast, and tea.
4 hours	35	Broiled.
4 hours	36	Toast, tea, steak—well done.
2½ hours	37	Soup at 11:30.
4-5 hours	38	Ham, steak, scrambled eggs, toast, jelly, coffee, fruit juice.

Length of time Preceding Game	Number of Questionnaire	
2 hours	39	Vegetable soup and dry toast.
2½-3 hours	40	Dry toast, tea, lettuce, steak, or lamb chops.
3 hours	41	Medium rare beef, baked potato, toast, tea.
2½-3 hours	42	Small steak with toast and coffee or tea.
4 hours	43	Steak, small.
2½-3 hours	44	Fruit juice, broiled steak, tea and toast.
3-3½ hours	45	Dry beef, 2 pieces of toast, 1 cup of tea.
3 hours	46	Light soup, boiled eggs, toast, tea, pudding.
4 hours	47	Orange juice, baked potato, steak, coffee, milk toast.
4 hours	48	Soup, steak, baked potato, toast, tea, and lemon.
3 hours	49	Tea, toast, steak. No potato.
3 hours	50	Poached eggs, toast.
2½-3 hours	51	Steak, baked potato, tea, and toast.
4 hours	52	Fruit cup, steak, toast, tea.
4 hours	53	Steak, baked potato, tea, toast.
4 hours	54	Fruit dish, small steak, toast, butter, lettuce, salad, and coffee.
4 hours	55	Fruit salad, boiled eggs or small steak, toast, butter, and tea.
	56	Toast, tea, steak.
4 hours	57	Steak, toast, tea, no potatoes.
5 hours	58	Soup, small steak, potato, and vegetable.
3 hours	59	Steak, tea, and toast.

In the following results of Table X it will be noticed that moderation and common sense seem to dominate the answers.

Most of the returns considered orange juice the beverage to drink between halves, but one athlete stated: "I like cold coffee between halves of the game."[1]

[1] Len Barnum.

TABLE X

	Yes	No
1. Do you believe sugar feeding before a game is good?	21	31
2. Would you use sugar feeding between halves?	25	27
3. Would you use sugar feeding as early as 24 hrs. before game?	13	39
4. Would you use sugar feeding as early as 218 hrs. before game?	11	39
5. Do you give the players salt tablets daily?	19	30
6. Do you allow the boys to smoke during training season?	40	15
7. Do you think the best policy is to pay no attention?	24	25
8. Do you permit it in moderation?	35	9
9. Do you believe in let-down periods if the training is sustained more than three months?	47	3
10. What drink do you prefer between halves?	Tea 6	Orange juice 30
11. Do you think that a player should start training before the regular season starts?	36	18
12. Do you believe in tapering off before a game?	52	2
13. Do you believe in rest for one full day before a game?	26	28
14. Do you believe in two full days' rest before a game?	0	48
15. As a rule, what is the length in time of your daily workout, after your schedule of games begins?	1 hr. 8; 1½ hr. 17; 2 hr. 13	
16. After your regular schedule of games gets underway, and playing on Sunday, do you prefer to scrimmage during the week?	32	5

Tables XI and XII cover the subject on the value of massage and the time of application. There was quite a varied opinion on this subject, and here I will quote some of the opinions.

"Massage is the sign of old age."[1]

"I never had a massage in my life. It tends to make a player temperamental."[2]

[1] Monty Slovak.
[2] Ernie Pinckert.

TABLE XI. VALUE OF MASSAGE

0	1	2	3	4	5
7	7	12	15	4	4

TABLE XII. TIME MASSAGE CONTINUED

Minutes	0	5	10	15	20	30	45	50
	1	5	18	14	5	0	0	0

The questionnaires present many different opinions, but one trainer summarizes what might be termed a cross section of all the opinions offered in relation to training methods. "I give massage very seldom, if the player is in good physical condition; otherwise, I give massage every day if needed, and from ten to thirty minutes, depending on what the athlete requires, and I am of the belief that an athletic trainer, through his daily practice, as a rule, uses his own good judgment."[1]

Table XIII deals with rating of the different types of massage and the opinions were so varied that no definite conclusion could be reached. Each type was voted for about equally.

TABLE XIII. RATING TYPES OF MASSAGE

	0	1	2	3	4	5
Stroking	2	11	5	3	12	4
Circular	1	12	6	7	8	5
Shaking	3	10	4	12	2	5
Kneading	2	12	11	5	7	2
Hacking	3	15	3	3	2	5
Plucking	4	13	4	4	1	9

Tables XIV, XV, and XVI deal with rating and time and length of application of Therapy Treatment of muscle injuries. The questionnaires showed that nearly all the athletes agreed on the use of Therapy Treatment.

Hydrotherapy was very prominent as one method of treatment, especially cold packs alternately with hot packs. In fact, twenty-three questionnaires voted for immediate application of cold packs.

TABLE XIV. RATING THERAPY TREATMENT OF PULLED MUSCLE

	0	1	2	3	4	5
Short very hot pack	6	4	4	9	3	11
Long hot pack	0	8	7	5	5	10
Hot and cold alternately.....	0	8	6	8	6	6
Diathermy	0	8	6	9	7	16
Whirlpool bath	5	7	7	2	3	20
Cold pack	4	12	3	1	1	12

TABLE XV. LENGTH OF APPLICATION FOR FOLLOWING BY MINUTES

Minutes	0	5	10	15	20	25	30	40
Short very hot pack.....	2	5	10	2	5	0	2	..
Long hot pack	0	1	6	7	2	1	5	2
Hot and cold alternately.....	0	2	5	7	2	1	15	0
Diathermy	0	1	4	13	9	4	7	0
Whirlpool Bath	0	1	0	18	9	0	8	0
Cold pack	1	2	6	12	5	0	3	0

TABLE XVI. HOW LONG AFTER INJURY DO YOU APPLY ANY OF THE ABOVE? INDICATE BY NUMBER OF HOURS

No. of hours	½	1	2	3	4	5	6	7	8	9	10	18	20	24
Short very hot pack	3	2	7	0	1	0	0	0	0	0	2	0	0	4
Long hot pack	4	6	6	0	0	0	0	0	0	0	1	0	2	7
Hot and cold alternately.....	11	4	1	..	1	1	..	..	..	..	..	..	..	3
Diathermy	..	3	..	..	..	..	..	..	2	..	..	..	..	7
Whirlpool bath	2	9	3	..	..	..	..	..	..	..	..	..	..	8
Cold pack	5	2	..	..	..	..	..	..	..	..	..	..	..	..

23 voted for immediate application, and none over one hour period.

In conclusion, the importance of training and diet has always had a rather significant position in the preparation of an athlete for competition, and it may be safely said that probably the many coaches down through the years have been decidedly influential in directing the methods of the past.

I think the advancement in the fields of physiology have had an influence on the dietary practices of the modern athlete. The results of the compiled questionnaires show that moderate indulgence may be followed by the training player for the consistently best results.

[1] Dave Woodward, Trainer, Green Bay Packers.

NEEDED STANDARDIZATION IN TESTING PHYSICAL FITNESS

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The writing of this article on measurement in physical education was prompted by an editorial under a similar title appearing in the April, 1942 issue of the *Journal of Health and Physical Education*. This editorial challenged physical education to agree upon tests to use in measuring physical fitness and to use them effectively. These points are entirely appropriate and should be given serious consideration by our proefssional leaders and workers: we *do* need a quick and effective medium for testing physical fitness; the time *has come* for a concerted effort by our profession to adopt standardized tests; and we should *at once* use in our programs the best tests available in this area. There have been many differences of opinion in regard to testing especially in relation to physical fitness, but these differences should now be set aside —if we do not do this our profession will have missed one of its greatest opportunities and will have neglected one of the gravest responsibilities it has ever faced. Physical education can be dynamically effective; proper measurement and appropriate follow-up procedures will make it so.

We should act at once, for negligence cannot be condoned at a time like this.

Selecting Physical Fitness Tests for Physical Education Programs

Before proposing actual physical fitness tests and follow-up procedures, the following six criteria should be considered as a logical sequence to guide one's thinking in the selection and evaluation of these tests and in their application to physical education programs:

1. Successful measurement involves determining and analyzing the truly important outcomes of physical education in terms of the needs and potentialities of individual pupils. In effect, it is an administrative device to aid physical educators to serve pupils better than otherwise would be possible.

2. While physical fitness is only *one* of the objectives of physical education, it should be, and certainly is in this time of national crisis, the primary objective. It is this quality that is fundamental to the efficient functioning of the organism, physically, mentally, socially, and emotionally. To the physical educator, physical fitness is the capacity of the individual for sustained physical activity.

3. The physical fitness tests finally selected should be appropriate for physical education programs. They should be of a type that physical educators are qualified to administer, understand, and interpret. This criterion would eliminate tests customarily given by medically-trained men, except where it is necessary to engage physicians to give medical examinations and other tests in order to discover and to protect pupils having handicapping defects.

4. Only tests of proven scientific worth should be recommended for general adoption. Satisfactory answers to the following questions should be assured before a test is finally accepted as a measure of physical fitness: Does it measure physical fitness? Can it be administered accurately? Can individual tests be interpreted? Is the cost of the test (testing equipment and pupil and teacher time) justifiable?

5. The tests selected should have been tried out in actual school physical education programs and found to be practical. Too many times, physical tests have been proposed for routine use in schools, which are too lengthy, too difficult to administer, or applicable only to relatively unimportant aspects of the program. Measuring instruments that have withstood the test of application in school physical education programs will be comparatively free of these handicaps.

6. The number of tests that can be administered by the physical educator in the average school situation is definitely limited by the time available. Consequently, only the most significant tests should be included.

Let us be practical with our recommendations; the physical educator on the job will appreciate it.

Nomination: Physical Fitness Index

As a selection of the physical fitness test most appropriate for physical educational programs, I wish to propose the *Physical Fitness Index*. The physical fitness test, from which the PFI is derived, consists of a battery of six strength tests (right grip, left grip, back lift, leg lift, pull-ups, and push-ups) and lung capacity. This test was originated many years ago by Dudley A. Sargent, M. D., and was statistically treated and refined more recently by Dr. Frederick Rand Rogers and others. With the construction of norm tables, two major scores are possible, the *Strength Index*, and the *Physical Fitness Index*, each of which has a distinctly different use. Rogers, by the use of norm tables, created the PFI, a score with which Sargent was totally unfamiliar.

The Strength Index is the gross score obtained from the six strength tests and lung capacity. It is proposed as a measure of general athletic ability

and should not be conceived either as a measure of physical fitness or as a measure of skill in any particular sport. *The Physical Fitness Index* is a score derived by dividing the achieved Strength Index by the norm based upon the individual's sex, weight, and age. It is this measure that is herewith suggested as a test of general physical fitness. As will be shown below, the PFI adequately meets the criteria proposed for the universal adoption of a physical fitness test.

A large number of physical educators throughout the East and elsewhere will vigorously approve this selection.

The PFI Measures Physical Fitness

It is readily recognized that, through large-muscle activities, the body is strengthened and its vital processes are speeded up. Circulation and respiration are improved, digestion is bettered and elimination is more efficient. Conversely, lack of exercise, physical drains, and dissipation—in fact anything that affects the body systemically—should be and is reflected in the strength of the large muscles of the body, and will reduce the capacity of the individual for physical performance. These conditions should, therefore, affect the Physical Fitness Index. There is ample evidence to indicate that they do.

Chamberlain and Smiley found that the correlation between the PFI and physician's estimates of health status is between .60 and .65, a correlation which in itself compares well with physicians' estimates of health. Innumerable case studies are also available showing the significance of strength and the PFI in revealing physical condition. Experiments with grip strength reveal interesting and convincing stories on the effect of illnesses, fatigue, and organic drains upon the body strength. Such conditions as thyroid deficiency, duodenal ulcer, cancer, tuberculosis, etc., have been discovered to be causes of low PFI's.

The accuracy of the test has been proved beyond question, reliability and objectivity coefficients being in the .90's.

After all, the media with which the physical educator works are the large muscles of the body. What is more logical than for him to measure their strength in order to determine body fitness?

The PFI Is Practical

Unquestionably, there is no other test in physical education that has received anywhere near the amount of trial under actual school situations as has the *Physical Fitness Index*. For over 15 years, the PFI has been used in public schools in New York State, in parts of New England, and in other scattered sections of the country. As a result, necessary changes in the test have been made in order to increase the value of the test for accuracy, validity, and usefulness. Constant improvement in testing techniques and follow-up procedures has resulted. Undoubtedly, the test can still be improved, and improved it will be as rapidly as new procedures can be devised, tried out in the schools, and accepted as practical.

A partial list of school systems now using the PFI includes the following: Albany, N. Y.; Baldwin, N. Y.; Braintree, Mass.; Brookline, Mass.; Cortland State Normal School; Elizabethtown, N. Y.; Fabius, N. Y.; Greenwood, N. Y.; Hamilton, N. Y.; Huntington Branch Y.M.C.A., Boston, Mass.; Johnson City, N. Y.; Kenmore, N. Y.; Lockport, N. Y.; Melrose, Mass.; Middletown, N. Y.; Milton, Mass.; Needham, Mass.; Newark, N. J.; New Hartford, N. Y.; Niagara Falls, N. Y.; North Syracuse, N. Y.; Pennsylvania State College (Women's Department); Providence, R. I.; Quincy, Mass.; Richmondville, N. Y.; Seneca Falls, N. Y.; Sherrill, N. Y.; Solvay, N. Y.; Syracuse, N. Y.; Syracuse University (Men's Department); Tarrytown, N. Y.; Whitesboro, N. Y.; and Yonkers, N. Y. The test has also been incorporated in the New York State Physical Education Syllabi for boys and girls, and the form for the test must be included on all physical education record cards approved by the State Department for use in the schools.

Who, in physical education, can match this with any other single physical fitness test?

Individual Needs Can Be Met

During the past three years, Syracuse University, in cooperation with the New York State Division of Health and Physical Education and ten schools in Central New York has sponsored a project in which procedures for conducting more effective physical fitness programs in the schools have been tried out. The project participants meet monthly for the purpose of exchanging ideas, discussing problems, receiving mutual aid, and considering "next steps". A similar program has been in process of development for the past ten years in the Men's Physical Education Department at Syracuse University itself.

The *Physical Fitness Index* is used to discover those boys and girls in need of special developmental work, and programs are worked out to meet their individual needs. Following is a brief resumé of the steps so far found to be effective:

1. Administration of medical examinations and PFI tests.
2. Selection of pupils with low PFI's, extremely high PFI's, and PFI's that are declining, for special follow-up treatment. Those with handicapping defects and with marked postural deviations should also be included.
3. Conducting preliminary case studies, each of which includes summaries of: (a) academic aptitude; (b) scholastic success; (c) social adjustment; (d) weight record; (e) defects causing mechanical or function-

al impairment in taking the test; (f) recent accidents, illnesses, and operations; and (g) annual medical examination (which should always precede the test).

4. Filling out health-habit questionnaire by each pupil.
5. Administration of the Washburne Social Adjustment Inventory.
6. Conducting individual conferences, based upon the information obtained from the preliminary case study, the replies to the health-habit questionnaire, and the results of the Washburne Test.
7. Discussion with the student concerning his health habits and the correction of any physical defects known to be present.
8. Provision of modified activity programs for those pupils with physical handicaps (upon advice of physicians).
9. Conducting developmental and conditioning programs for those in need of large-muscle activity.
10. Provision of relaxation programs for the chronically fatigued or hyper-tensed.
11. Giving special posture exercises to those who need them.
12. Taking appropriate steps for those who have social adjustment problems, such as counseling, participation in group activities, and development of individual competence in physical activities.
13. Sending those pupils to other specialists, such as physicians or psychologists, where the cause of low PFI's points to physical defects, organic lesions, or serious personality maladjustments.
14. Re-testing all low fitness pupils at four to six weeks intervals in order to determine the effect of the program upon each individual and to measure results.
15. Making further program re-adjustments where necessary, especially when the results of re-tests indicate lack of improvement in physical fitness.

This is no longer theory: we know it works.

The Program Is Effective

Average increases of 12 to 15 PFI points per year are typically reported for boys participating in this sort of physical fitness program. At Syracuse University, the average annual PFI increase for the past three years has been 19.5 points, an improvement of 25 to 30 per cent in physical power and strength, results that cannot fail to be very significant for the present and future well-being of these individuals. These figures are considerably above those for other types of physical education programs upon which checks have been made.

The total-school averages for schools participating in this program show much greater scores than for the average school over the nation (100 is the average expectation). Such average scores as the following have been recorded for boys in the Project schools:

Waterville, N. Y.	127
Hamilton, N. Y.	122
Sherrill, N. Y.	112
Warners, N. Y.	112
North Syracuse, N. Y.	112
Whitesboro, N. Y.	108

A check on Army and Navy examination statistics at Waterville, N. Y. where an outstanding physical fitness program has been conducted for a number of years, shows that of 58 graduates of the school only two were rejected, and these two were subsequently accepted. Thus, none of the Waterville graduates has been refused for military service, a remarkable figure when compared with national Selective Service rejections. A similar situation prevails at both Hamilton, N. Y., and North Syracuse. Of course, there may be other factors contributing to this very fine record, but it does seem significant that high PFI averages, excellent physical fitness programs, and few army rejections appear together.

Can you doubt that the physical educators in these schools are enthusiastic about their programs?

Objections?

The amount of time required to administer PFI tests, the need for trained testers, the cost of special equipment, such as spirometers, manuometers, and dynamometers, and the amount of detail and care required for planning and conducting individual fitness programs might be listed among obstacles to the general adoption of the PFI tests and follow-up procedures. Let us see how serious these objections really are:

1. Testing time as an obstacle can be dismissed with a word. With proper organization, PFI tests can be administered and scored at the rate of one per minute for each set of apparatus. And, too, one can always start with a small number rather than with the whole school and permit initial successes to pave the way for expanded programs.
2. Trained testers *are* needed and it is a serious mistake for the untrained to use this test. However, other professions do not disregard procedures that are effective simply because training is required. Where would we be today if the medical profession operated on this basis?
3. The cost of equipment should not be a deterent factor. It is the old story of "how much can you get for your money". If the use of this test fulfills a really fundamental need in the *education* of boys and girls, as it surely does, then it is well worth the cost—and more.
4. Finally, it must be said that carrying out

these programs of determining and meeting individual fitness needs is not easy. They require hard work and close attention to detail. These factors coupled with the usual heavy load of the physical educator, make the problem of inaugurating and conducting such programs especially difficult. Many physical education teachers, however, are attempting it feeling that the benefits to be derived by the pupils in increased fitness, academic success, and happiness and by themselves in professional growth, prestige, and respect are well worth the effort and attendant sacrifices.

"Question!" "Question!"
"All those in favor . . ."

LET'S GO MODERN

JANE FOX
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Our program in physical education has developed around the idea that the boys and girls should be separated for instructional periods in activity. In many instances this traditional idea has been adhered to even in the face of the knowledge that some of the activities would be greatly enhanced if presented to mixed groups. This is a time when traditions in other fields of endeavor are being broken by women entering many lines of work which have been thought to be the particular province of the men. Perhaps this may be an opportune time for the men to do a little looking about to determine if there are any of the women's physical education activities upon which they should make an invasion.

At the outset I presume certain criteria should be set up for those activities which lend themselves to mixed-group participation—we might say that the activities which require agility and skill and are non-combative in nature would be suitable and appropriate for this purpose. At once we can see that all phases of dance—social or ballroom, folk, tap and modern would fall easily into this category. There is much potential interest and stimulation in a group of boys and girls folk dancing together. It is altogether proper that, out of the socializing experiences which they have gained, there should come an interest in and a desire to enjoy other types of dance together. The modern dance is the one of the above types which because of the vigor of movement, the complete use of the entire body, has the greatest offering to make in the physical development of the individual and which, because of the wide range and variety of movement, may be enjoyed and engaged in with equal value by either sex. This area of dance which has been developing since 1900 has within the past ten years reached maturity and enrichment both in physical education and in art. This progress must have been brought about by its merit for it has grown and developed without fanfare. It is logical for the development to have taken place under the wings of physical education instead of some other department within the school, since in part at least, it is an expression of the ultimate goals of physical education. For the sake of clarity the term modern dance is used to indicate the type of dance which uses body movement for expressional purposes and which is not based upon a prescribed set of techniques. Since there are no prescribed techniques the dancer is free to explore and discover movement, rhythm and design which may best express his ideas.

To most teachers of physical education it will not be a strange statement to say that the torso is the center from which all movement should initiate. That is one of the principles upon which we lean in presenting the techniques of a sport or the techniques of modern dance. It is from this center that we gather together our forces for the expenditure of energy so that movements result which have control, co-ordination and the proper relationship of tension and release. Modern dance and the other activities of physical education which utilize the entire body are not at variance on this point—they are in the closest harmony and the value of both will be increased with the recognition of this fact by all persons engaged in the teaching of activities.

We stress and utilize the natural movements of the body in both physical education and the dance. The modern dance directs the natural body movement into the realm of creative activity and in so doing distorts and changes the natural movement. This is a perfectly understandable and legitimate procedure. Even with this distortion the original impulse should be felt so that nothing of sincerity and directness is lost in the process. If we think of distortion as any thing away from the natural we need not view the term with alarm or shy away from it. Distortion is inevitable in the unification of any elements into form and it is this unifying process, which we call composition, which is the ultimate goal in the dance. That is the answer to the critics of modern dance who insist that it is nothing more or less than gymnastics. It is true, both gymnastics and dance work for body control, strength, flexibility and co-ordination through affording opportunities for as complete movement experience as is possible. But the point at which

the similiarity is broken off is that the dance draws upon these very elements and movements which have produced these results and utilizes them in a creative way. It is almost as if we had in our vocabulary a great many isolated words and never bothered to select, organize, and unify so that the words might be used effectively to express ideas.

The recognition of the importance of form leads at once into a discussion of the necessity for that very thing both in dance and all other activity. A sports instructor insists upon good form. The dance instructor makes the same demand for the same purpose—a body disciplined for effective coordination and efficient timing. With the dance the recognition of the correctness of the movement ing in dance which is akin to the same exhilaration felt when a boy or girl is playing a game of hockey or basketball.

Having pointed out some of the points of similiarity and agreement between the other activities of the physical education program and the dance let us consider the unique contributions which the dance has to offer. The program of physical education is enriched with the inclusion of the modern dance because here-in lies the opportunity for participation in a creative activity. There is no dictation by rules except those of an artistic and aesthetic nature. The dancer is free to explore movement, to discover the possibilities for movement and to select, organize, and plan so that ideas and beliefs may be expressed through the

"Country Dance." A Composition by The Indiana University Workship

with the proper relationship of tension and release and the ability to utilize these movements so that a dance well-built in design results, is most important.

It is true that the modern dance has a certain athletic quality. It's emphasis is upon freedom of movement, upon broad sweeping movement. The American is not interested in little mincing steps. There is something about the great reaches of space about us that incite in us a desire to move in keeping with our surroundings. There is a joy in movmedium of movement. After the selection and organization there is a period of critical evaluation of the finished dance with suggestions and comments by the dancers, the members of the group, and the instructor. This very complete educational experience, one that engages the dancers mentally, physically, and emotionally, is also a socializing one in that group co-operation, leadership and direction are called for. In any student group constructing a composition we see a constant interchange of ideas, suggestions from different members

of the group, leadership shifting within the group, and once a decision has been reached—resulting action.

Dance is essentially a social activity and promotes a wholesome sort of relationship between boys and girls. From the author's experience with mixed groups in modern dance she feels that there is an increased satisfaction in the dances which they create, also the scope of ideas about which they dance is enlarged tremendously.

Thus far much more has been accomplished in the field of dance for girls than for boys. If we agree that the modern dance meets the physiological and psychological requirements which we set up, we must agree that the boys would derive the same benefit as the girls from participation. Prejudices must be overcome as there are still a large number who think it unmanly to dance. Let me remind them of the periods in primitive society and early civilization when the dance was a necessary part of the education of the youth, when only the men participated in the dance. It was only when the dance had become decadent and the value of the dance as a movement art lost sight of, that it became a pretty and amusing thing almost entirely reduced to feminine participation.

At the present time there are very few colleges which offer opportunities for the men to participate in dance classes which have a teaching emphasis, so that most work which is done with coeducational classes is under the guidance of a woman instructor. Until the time comes when men are trained for teaching, they can lend support and interest to the women who are pioneering in this field of instruction. The author appeals to the teachers, both men and women, to give the boys a chance in this stimulating activity which we call modern dance and with the proper motivation and guidance the results are bound to be most satisfying.

TRAILS TO THE PRACTICE OF DEMOCRACY*

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Democracy is a word; we roll it on our lips with unction. Democracy is a concept; gladly we pay our emotional allegiance to it, even when we are confused regarding it intellectually. Democracy is a form of government; as Americans we treasure it and are willing to struggle for its preservation. Democracy is also a way of life; and many there are who hunger after it, even as their feet stumble in their efforts to find the trail.

It is characteristic of our day that we are trying with persistency to bring this thing called democracy into the humble circles of our every-day living. We are certain in our minds that democracy is more than a rule of the majority, more than a priceless system of government. High sounding definitions leave us bewildered. The office, the store, the mart, the church, the home, the college campus—here our lives are lived. What is the pattern of democracy for them?

The department of physical education for women at Denison, under the chairmanship of Helen Barr, has taken for its special endeavor this year the blazing of trails to this practice of democracy. The faculty and student leaders have said: "One of our jobs must be the translation of democracy into the attitudes and activities of the playing field."

Where does one begin?

Miss Barr's answer has been: "Democracy, as we assume, is both a way of personal life and a mode of associated living in a frame of reference in which life comes first. Democracy builds its strength, we believe, through diversity, gathering impetus through the seeking of numerous minds in many activities. Let our department undertake the project of trying consciously to teach our Denison women what democracy looks like and feels like."

In marking these trails, four leading questions have been asked. Each of these has been formulated in two ways: first, departmentally (A), for the adult leaders, and second, personally (B) for the individual student. And under each leading question there has been written a series of check questions—aids in translating democracy into activities and attitudes.

Democracy of the Playing Field

I.

A. How carefully are all procedures in the department contributing to the ideal of equality of opportunity in all dealings with the students?

B. Do I act as though I believe everyone should have equal chance with me?
   1. In all dealings are we willing to take turns and share physical equipment on the principle of first come, first served in order?
   2. Does everyone have equal opportunity in classroom discussions?
   3. Does everyone have opportunity to demonstrate abilities?
   4. Are we using all modern devices for recognition of individual interests and abilities?
   5. Are we respectful of minority opinion?

* This article appeared in *At Denison*, published by Denison University, Granville, Ohio.

6. Are we flexible to intelligent change?
7. Do we appreciate diversity as a value?

II.

A. What are we doing to develop a sense of responsibility in each student?
B. Am I responsible for my share of the load?
   1. Are we providing everyone with opportunity for leading in areas where she is capable of leadership?
   2. Are we developing a sense of loyal followership in areas where she is not so equipped?
   3. Are we standing by the consequences of our own responsible decisions, even when the outcome is unfortunate?
   4. Do we take honest criticism as a challenge?
   5. Do we occasionally turn inward for self-survey and appraisal?

III.

A. What opportunity do we offer for freedom, for voluntary choice, and for self-directing?
B. Do I have opportunity for freedom, choice, and self-direction?
   1. Do we permit and encourage a wide and varied choice of recreative activities, developmental skills, committee work, etc.?
   2. Are we teaching girls to lose as well as to win?
   3. Are we allowing them the privilege of picking their own leaders?
   4. Are we permitting these leaders even the freedom of an occasional mistake?
   5. How fully do the students participate in the planning and executing of the program of activities?
   6. Are we encouraging the plays and patterns of their own intelligent wish and choice?
   7. Are we interpreting our job as one of guidance rather than domination?

IV.

A. What are we doing to teach regard and respect for the personality of others?
B. Does my conduct indicate my regard and respect for the personality of others?
   1. Am I prompt and dependable in keeping appointments?
   2. Do I tend to consider my own rights as being more important than those of my neighbor? Am I constantly thinking of myself as a special case?
   3. Do I conform to rules and regulations, realizing their necessity for group life and achievement?
   4. Can I get along with a wide range of people or do I mix only with my own peculiar sort?
   5. Am I willing to cooperate for the common good?
   6. Am I not only in and of the group, but also for and with it?
   7. Do I really think and act independently but *with* others?

The motto of the department is:
MY LIFE GOES TOWARD DEMOCRACY.

I MAKE MEN AND WOMEN!

I am a moulder of MANHOOD and WOMANHOOD.

I take boys and girls, young men and women in the plastic, impressionable period and enlighten them in the art of living—fit them for SUCCESS by teaching them how to be STRONG, CLEAN, EFFICIENT.

I am a trellis to which the tendrils of youth can cling in health, and happy well-ordered growth, avoiding snarls and tangles due to ignorance, idleness, neglect.

In an age notable for powerful allurements of the forces of evil, I constantly present virtue in its true attractiveness. I mix morality with MIRTH, flavor discipline with FUN, and exalt always the glory of STRENGTH—physical, intellectual and moral.

A little more than a century ago I was but a thought in the mind of a man. Today I influence for good many thousands of members, touch every civilized nation, and am growing—growing—GROWING.

I am a grain of mustard seed which a man took and cast into his garden, and it grew and waxed a great tree, and the fowls of the air lodged in the branches of it.

I am at work in the schools thoroughly equipped and organized for the service of young men and women, boys and girls.

I am PHYSICAL EDUCATION!

"RECREATION IN WAR TIME"*

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Recreation is the inalienable right of all people in America, whether during war or peace. This right is as deep-rooted and as constitutional as the "four-freedoms"! It has been placed in the constitution as the "pursuit of happiness" and is found specifically mentioned in the fourth and fifteenth amendments. In war time, the need for recreation is intensified for those on the home, training and war fronts.

In the America at peace and the America at war, *recreation* is a necessary part of the "all out" effort in achieving victory for our way of life. It becomes part of the warp and woof which integrates our people, both old and young, into a pattern of attitudes, desires, hopes and accomplishments which forms the mosaic which we call "American Democracy".

A steadily growing appreciation of the value and power of recreation is permeating the social consciousness of our nation. The army and navy organized, even before Pearl Harbor, Morale Divisions, in which were placed the amusement and recreation activity direction for our armed forces. The U.S.O. have erected permanent recreation facilities adjacent to camps and industrial impact areas. The American Red Cross are now sending recreation directors with each of the units accompanying our expeditionary forces. Many of our alert communities are enriching the recreation programs for our people on the home fronts. The Federal Social Security Agency, Welfare and Recreation Division, many months ago placed 70 field representatives throughout the country to assist communities in providing recreation facilities for the men on maneuvers. The March 1942 issue of the Survey Graphic was entirely devoted to "Fitness for Freedom". This issue by implication and titled articles, pointed out the values of recreation in war times. Further, a recently appointed governmental committee has been established in order to provide extensive recreation equipment for our neighbor—Mexico.

Recently a great deal of unfortunate publicity has been associated with Physical Fitness. The Office of Civilian Defense, Division of Physical Fitness, has come in for much undeserved publicity because of the complete lack of understanding by certain self-appointed authorities of the values of recreative activities for children. Such outburst, many times for political reasons, clearly indicate that there is still a need for a more thorough appreciation of the values of play, as well as the implications of the word, "play". Too frequently many adults are still thinking of play as a waste of time and akin to the devil. The shadows of our puritanical ancestors still rattle their chains. These clanking chains literally incarcerate the programs which have so much to do with the establishment of morale among our fellowmen.

Today, Recreation is both appreciated and damned. Nevertheless, our social leaders, many of our political leaders, and the great majority of the people vaguely but with increasing vision, understand that Recreation is a necessary and important part of our war effort. May we now elaborate on its importance, as it is not only a factor in the "pursuit of happiness", but a part and parcel of the plan to retain our "four freedoms". Due to time, the factors will be discussed as they relate specifically to our schools and colleges.

Building power to sustain effort through vigorous recreative sports lays the foundation for re-resistance to disease, better respiration, circulation and elimination. Power nevertheless, is not built by tidbits of participation. Such tidbits are scheduled for our elementary school population. Even under the best conditions, vigorous recreative sports are only scheduled during a year for 2.6 percent of the child's time in the elementary school (100 minutes a week for 40 weeks). Needless to say, such a time allotment will not build power to sustain effort nor will it develop an interest in participating in recreative sports outside of school.

Other areas of recreation such as crafts, arts, and music, if taught at all, are so formalized that the child in the elementary school builds up a distaste rather than a taste for more of these activities. These activities, even when scheduled in the elementary curriculum are offered for such a small period of time that interest and abilities are seldom generated except in those having outstanding natural talents.

At a time when vigorous recreative sports and hobbies are needed to promote health and emotional stability among our children, our schools are, in too many instances, teaching the three R's and totally disregarding the fourth and most important R, Recreation.

Our high schools have been even more negligent in providing vigorous recreative activities for all. Any program having as its objective the increase of endurance is limited to our ten or twelve varsity

* Given Before: Seventy-seventh Annual Tennessee Education Association, Health, Physical Education and Recreation Department, Nashville, Tennessee, April 3, 1942.

players in football, basketball, track and baseball. Even then when an attitude toward condition on our varsity teams is generated, it applies only to condition during the season. If the student is a one-sport participant, breaking training is *reward* for keeping in condition during the season. Is it of little wonder that we have built, by precept and example, into our participators and spectators a spirit of temporary rather than permanent conditions?

The ninety percent of our high school students, except the boys in small high schools, have under the best average conditions the opportunity to participate in only *66.6* hours of vigorous recreative sports (two periods per week during the freshmen and sophomore years) during their entire high school career. With these few hours, teachers are supposed by build a Young America fit to preserve our democracy.

Vigorous recreative sports for high school pupils does not provide an escape from the grim realities facing our way of life, but rather provides training for a better fight to insure the retention of our "four freedoms". The condition developed through recreational activities is not a commodity — the production of which can be speeded up. It takes years of preparation in the elementary, secondary and colleges to produce a fitness equal to the task of winning this war and its subsequent peace.

Gregor Zeimer in his "Education for Death" indicates how Germany has prepared its students from the elementary school through life to work, play and fight for the Fatherland. Recreation and Physical Education, in the main, was used as the indoctrination agent. Needless to say, we disagree with the objective—vassalege to the state—but we should appreciate that in recreative sports resides the potent drives, desires and emotions which become the mainsprings for future concepts and actions.

There is no reason to believe that Recreation in America could not justifiably be used as the indoctrination agent for Morale—fitness within—and physical fitness. Our objective would be team-mindness, not state-mindness. Present and future recreation programs should be used to strengthen our democratic knowledge, beliefs and skills.

"The flesh and blood of a democracy is how people participate in it"—the participation by *all* in sports, games and rhythms from the elementary level throughout life gives experience in democratic ways of living. These recreative activities are the training grounds for those who will be responsible for carrying out the democratic plans for tomorrow's peace.

Recreation and Morale

Morale could be defined in numerous ways. Each definition would stress certain values which to the definer, seemed most important. Nevertheless, the student and adult would generally agree that it is a characteristic which is recognized when present, and very evident when absent. It might be thought of as, "fitness within". It represents a condition of the individual or group which is best exemplified by integration or "team mindedness".

All recreative activities demand concentrated attention to the task at hand. They also demand an acceptance of success and failure. Success or failure is never static, they fluctuate between the two, whether the individual participated in music or football. The training received in meeting continually re-occurring success and failures, conditions individuals and groups to be continually ready to adjust to new situations, new problems, and new ideas.

In times of tension, such as exist today, children and adults are more prone to lose sight of the fact that failure follows success as success also follows failure. Vigorous and creative recreative activities assist the child and the adult in meeting the fluctuations of the fortunes of life and war.

In a recent penal report, the records indicated that although there had been less burglaries of late, there had been more homicides during recent months. This was ascribed to the fact that nerves are "frayed" by the trying times and emotions are more poorly controlled, subsequently resulting in the more serious crime of homicide being committed. Such a condition, even though it exists among only a fraction of our population, does point out the fact that substitutes for the release of pent-up emotions need to be provided for all our children and adults.

Recreation may actually provide activities which promote this release of emotional tensions. Team games, rhythms, individual sports, creative art, drama, and music are avenues of expression which can be provided to meet this need for those in and out of school. This will only be possible if our schools become neighborhood clubs, open from 4:00 P.M. through the evening, for recreative activities for children, parents, and the general adult population.

Cannon has suggested in his book, "Wisdom of the Human Body" that wars, themselves, might be eliminated if, instead of throwing whole countries into war, our diplomatic leaders would fight it out themselves in the ring, on the basketball court, or on the football field. He further indicates that wars may be caused because the stored-up and unexpended emotions do not have a chance for normal release in games, contests, relays, dances, art, music and dramatics.

Such citations give evidence of the role recreation should take during war time. Boards of Education, Principals, and Recreation Leaders should, accordingly, provide the facilities, equipment, time

and leadership for an enriched program during the present emergency. The emotional high-balls should be served in our recreational centers in the forms of recreative activities instead of the taverns in the form of liquid refreshments.

Recreation and Thrills

Days such as these are filled with actual and vicarious thrills for both our armed forces and the home guard. Newspapers, magazines and conversation "play-up" the unusual. Heroes are publicized and production quotes are stressed. Every child and adult feels the increased tempo in living. Those on the home front have by necessity become migrant workers who transplant themselves and families to new and different environments.

In our industrial impact areas, many of our people are living in trailer camps, or other restricted living quarters. Even the normal forms of leisure are overcrowded or entirely lacking for both the worker and his family. Add to these conditions the escape from the grim realities of war, long hours of labor and inadequate home life, and you have a situation which expends itself in a full-fledged chase for thrills.

Commercial groups have sensed this condition and provided bigger and more gaudy taverns, districts of ill-repute and gambling casinos. Recreation for many high school students and adults have been interpreted to mean, "Wine, Women and Song." In contrast to this, our educational agencies promoting wholesome recreation have in too many communities, utterly failed to even provide a "second run" attraction. Where agencies, such as the school, have attempted to meet this competition in an "all-out" manner, it is surprising the drop in attendance that has occurred in those areas promoting unwholesome recreations.

Such a challenge is facing every community today. This challenge can be met only by:

1. A community recreation council geared to integrate the facilities, time and leadership of all agencies responsible for child and adult recreation.
2. A program of varied activity ranging from (a) checkers and chess to vigorous team sports; (b) from children's "kazo bands" to community orchestras; (c) from classes in sewing to style shows; and (d) from soap carving to oil and water color painting.
3. Leadership both volunteer and paid, which are trained to provide wholesome and thrilling recreative activities.

Can American Communities meet the needs, desires, and activity drives of their members or will history say that the American Dough-Boy was a great fighter but those on the home front did not produce morale and materials which would allow him to retain for his country and his allies the "four freedoms"?

STORYTELLING AS A MORALE-BUILDER FOR CHILDREN

DESSA M. FULTZ

Recreation Director, The Los Angeles City Schools

Children everywhere are feeling the nervous tension that is one product of the war. Even American children, who thus far have happily been spared first-hand knowledge of the horrors of war, have these horrors rather constantly kept in their minds by means of the radio, newspapers, and the conversation of their elders. They hear and read of bombings, sabotage, bloodshed. They see war-pictures at the movies. Another factor that makes for tension is the fact that, in all too many cases, the child's home is not the best possible for his well-being. Often, nowadays, both parents work, being away long hours, and leaving the children of the family to look after themselves, or in the care of some person unfitted for the task.

This is inevitable; the result of present conditions, in our warring world. But it places a heavy responsibility upon the shoulders of those men and women who have been trained to work with children, guarding their health, and endeavoring to develop them physically, mentally and spiritually, by means of recreational activity. We must do all that we did before our country was at war, plus the immensely important business of keeping up the children's morale.

Just what do we mean by morale? Well, that dependable authority, Noah Webster, defines it as: "The moral condition, or the condition in other respects, so far as it is affected by or dependent upon such moral factors as zeal, spirit, hope, confidence, etc.; mental state of a body of men, an army, and the like."

This definition makes it sound important. It is. It has always been considered of great importance by military leaders. Napoleon is quoted as having said that ninety percent of a soldier's efficiency depended upon his morale. If this was true in his time, it is doubtless true today. And if it be our duty to do what we can to keep up the morale of our fighting men, it certainly is no less our duty

with respect to the generation of children for whose right to live in a decent world these men are fighting. We dare not allow those who are going to have to cope with the world problems which will follow the war, to suffer a let-down in morale now, in this the formative period of their young lives. We must do all in our power to see to it they have "vim, vigor and vitality," not merely of body, but also of spirit.

How? Here is where the trained storyteller finds a golden opportunity. Any fairly intelligent person can tell a story after a fashion, but it takes years of training to do it so as to get the best results. The average child has a vivid imagination. The aim of the conscientious storyteller is to direct that imagination into the proper channels, instilling in the young listeners, emotions that will inspire them with a desire to be brave, honest, kind, loyal and patriotic. It can be done. It *is* being done, in countless cases, as every successful storyteller has had experiences to prove.

I, myself, have had many. For instance, when I was visiting one of our playgrounds recently, I was halted by a pleasant voice calling: "Hello, Story Lady!"

I looked up. The speaker, a tall young man in army uniform, impressed me as vaguely familiar in appearance.

"You must be one of my story-hour boys grown up," I guessed.

"You bet I am," he answered. "I used to sit on the ground at your feet when there weren't chairs enough to go 'round—and I'll do it now if you'll tell me the story of 'The Jawbone Telegraph', or 'The Sardinian Drummer Boy', or 'The Red Badge of Courage'. It's funny! I've never forgotten those stories."

I asked him *why* he hadn't.

He thought a minute, then said: "Well, I suppose it must be because the boys in those stories were very brave."

A younger boy, listening-in, spoke up. "That's the reason I like 'The Broken Note' the best of any story. That Polish boy wasn't afraid to blow that trumpet, even when he knew the Monguls would kill him. After I heard that story, I read the rest of the book, *The Trumpeter of Krakow*. It's swell! And say! I just bet you the Poles get their country back from Hitler—the same as they got it back then. And I think anybody who'd heard that story would be ashamed to be a coward, or not to be willing to do all he could for his country. I'm buying war stamps and collecting scrap for the government now; and when I'm old enough . . ." He paused to give the young soldier an admiring look. "When I'm old enough," he repeated, "I'll be a soldier, too."

To one who has had such heart-warming experiences as the one I've related, it is somewhat exasperating to hear people speak of story-telling as if they regarded it as mere entertainment for children. Of course it is entertainment. But not mere entertainment. Rightly done, by a storyteller who loves his work, it is character-building.

A question often asked is why children are told stories rather than encouraged to read for themselves. The answer is that no one denies the fact they should be encouraged to read. But to the beginning reader the effort it takes to follow print occupies so much attention it interferes with the free range of imagination. Until he has learned to read easily, the child cannot change places, mentally, with the hero of the story, to ride away on a magic carpet, to thrilling adventure. He cannot assume the role of the story-character, and perform brave deeds, solve mysteries and rescue people in distress. In short, he misses many of the emotional reactions the storyteller wishes him to experience.

They are great posers, children; and one of their commonest poses, especially with small boys, is that of stoic. The average small boy will assure you he is not afraid of anything. Not he! Bring on your danger! See if he's scared! Bless his heart, he is afraid of many things. His very braggadocio is a cover for fear. Somebody has said: "Man's life is an alternating day and night; the sheer joy of living, then the shadow of doubt. One moment is exultation, one moment despair." This was written of the adult human, but I think it more nearly describes the see-saw moods of children, who do not understand why their spirits go up, then down. Their bewilderment frequently leads to what we call juvenile delinquency. We can be thankful that they *are* so apt to see themselves, mentally, in the role of their favorite story characters, because that gives the storyteller an opportunity to direct their thoughts into wholesome channels.

It is not necessarily or solely from stories of courage that children have been cured of some particular fear which weakened their morale. A friend told me that, when he was a little boy, he was terribly afraid of snakes. Then he heard some stories about snakes that awakened his interest in them. He began hunting them out, to study them. One day he brought home five water-moccasins in a bucket. He knew that his mother had a horror of snakes. Not to frighten her, he left the bucket containing his catch in a vacant lot across the street from the house. What he forgot, in his excitement, was that his father hated snakes as sincerely as did his mother. When his dad came home that evening, the boy proudly took him to see the pailful of *Agkistrodon piscivorus*. The result was disappointing. Instead of the praise he expected, his dad, to use my friend's own words, "threatened to lick the hide off him if he didn't get rid of the snakes immediately." There was

nothing to do but obey. The boy killed all of the reptiles except the prize of the collection, a six-footer, that evening. The big fellow he kept for a few days, then killed and skinned him, and made the skin into a belt. Incidentally, he was not permitted to keep the belt.

Admitting that, in this case, the boy was too well cured—that is, he became too fearless of snakes for his own safety and the peace-of-mind of his parents—the point remains. The incident furnishes a good illustration of the fact children are greatly influenced by the stories they hear. Which makes the responsibility of the storyteller a momentous one.

It is a responsibility likely to grow heavier, at least until the war is won. For the duration, more and more the talk children hear, the pictures they see, the headlines they read, will be such as keep thoughts of war in their minds. This puts it squarely up to the trained storyteller in the recreational field to do his best in the interest of juvenile morale. It is his vastly important task to serve his country by using his art as a morale-builder to children.

AN INVENTORY OF MOTOR FITNESS[1]

THOMAS K. CURETON, Ph.D.
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This inventory of motor fitness areas has been employed as a criterion for the Motor Fitness Screen Test by the author. The items contained herein provide valid exercises for use in modern physical fitness programs for men in colleges and high schools. The screen test derived from this Motor Fitness Inventory is a valid, inexpensive measure of capacity for vigorous work or athletic effort and should be extremely useful in present day programs of physical fitness. For more complete instructions as to the use of the screen test the reference cited below is recommended.

Fundamental Definitions

Motor Ability—is the ability to execute motor skills (not necessarily athletic, as piano playing, typewriting, stringing a tennis racquet, eating, etc. are motor skills). A *motor genius* may be one who learns easily all motor skills and who rises to exceedingly high levels in some of them. A *motor moron* is one who learns motor skills with great difficulty and who is definitely retarded in many far below the average level of performance.

Physical Fitness—is a complex of several recognized types of fitnesses, such as (1) normality of weight, (2) nervous stability, (3) circulatory-respiratory condition, (4) immunity to disease, (5) normal body type, (6) symmetrical and adequate physical development in the various segments of the body, (7) endurance and a high energy level in a wide range of activities in life, (8) normal sight, hearing, taste, feeling and smelling senses, (9) good teeth, and (10) at least average ability in a wide range of motor ability events with some relative superiority in athletic achievements involving events of balance, flexibility, agility, strength, power, and endurance.

Motor Fitness—is a limited phase of motor ability which emphasizes capacity for vigorous work or athletic effort. Specific aspects of emphasis are (1) endurance, (2) power, (3) strength, (4) agility, (5) flexibility, and (6) balance. It emphasizes the *fundamental* or *gross* big body movements dominated by muscular energy, kinesthetic sense, and suppleness of the major tissues and joints, i. e., those aspects which are fundamental to athletic or work skills rather than the higher refinements pertaining to specialized skills which require years to perfect. More specifically, by *motor fitness*, we mean the capacity for efficient performance in the basic requirements of running, jumping, dodging, falling, climbing, swimming, lifting weights, carrying loads, and enduring under sustained effort in a variety of situations. Quick and efficient control of the body in an emergency situation may save the life of one individual or many. One should be able to change his position quickly to avoid capture, fire, flood, bombs, gas, shells, or gun-fire. Obstacles must be overcome, sometimes in a hurry. Speed and endurance in the fundamental locomotion efforts are first essentials. When soldier recruits cannot as as average, run speedily or steadily for a long time; cannot swim if they are trapped at a river, or pushed into a lake, or fall through the ice; if they cannot jump over obstacles in their path, vault fences or barricades and climb out of holes; if they cannot dodge snipers, missiles, or would-be captors; if they cannot bear burdens to form barricades or show force and power in transporting their belongings and food; if they cannot show stamina in long hikes carrying loads—how then can any army or body of civilians, made up of such men, survive? How fit are we in doing these things? Would an Olympic Decathlon athlete be fit? Would a winner of the Sigma Delta Psi key be fit? Would a football player be fit? Would a person who scored high on the Chinning-

[1] Copyrighted material published by permission of author. For more complete information see—*Physical Fitness Workbook*, Stipes Publishing Co., Champaign, Illinois. 1942.

Jumping-Dipping test be fit? Could a test be arranged to sample ability in these fundamental activities?

Athletic Skill—means proficiency in specialized phases of athletics, such as:

(1) *Aquatic activities:* some 400 specific activities in swimming, diving, life saving, water polo, canoeing, boating, etc.

(2) *Gymnastic activities:* some 400 specific activities on apparatus: rings, side horse, parallel bars, long horse, or tumbling stunts.

(3) *Combative activities:* such as: boxing, fencing, wrestling, etc.

(4) *Rhythmic activities:* such as: American square dancing, folk dancing (foreign), clog dancing, social dancing, tap dancing, etc.

(5) *Individual sports:* such as: track and field activities, weight lifting, archery, bait and fly casting, bowling, golf, skating, quoits, etc.

(6) *Raquet games type:* such as: badminton, tennis, ping-pong, handball, etc.

(7) *Team games type:* such as: football, baseball, soccer, hockey, volleyball, etc.

Areas of Emphasis in Fundamental Aspects of Motor Fitness

Logical Analysis of Motor Fitness—A logical analysis of motor fitness shows that there are six important areas of emphasis which must receive attention in programs for conditioning the body. "Fundamental Aspects" of motor fitness involve those anatomical and physiological characteristics which underlie the gross movements of the body, omitting highly coordinated and specialized abilities like those of a tennis serve, a golf drive, a football drop-kick, a crawl stroke, a baseball throw for accuracy, etc. In each of these areas there are available a great number of stunts and conditioning exercises which deserve representation and emphasis in conditioning programs. The six fundamental aspects are:

1. BALANCE—emphasizes mental control and poise (with and without sight), the kinesthetic sense of position, and the various anatomical and physiological capacities which regulate acts of balance. In gymnastics, aquatics, and in normal life such ability is necessary under a great variety of conditions for skill and for safety.
2. FLEXIBILITY—emphasizes the capacity of the body to move easily to the full range of joint flexion and extension without undue restrictions in the joints or tissues. Good flexibility usually indicates that there are no adhesions, abnormal joints, injuries, or "muscle-bound" conditions of serious import. Body suppleness also indicates roughly a type of anatomical and physiological youthfulness, an important characteristic of gracefulness. People with very inextensible tissues are apt to be awkward.
3. AGILITY—emphasizes the capacity for fast reaction in controlled movement where "accuracy" is also a feature. The ability to handle the body quickly and precisely, not necessarily with maximum force or power, in such events as: springing suddenly to the feet, dodging, jumping over a stick held in the hands, jumping through a loop formed by one hand holding the opposite foot, hitch-kicking a high object with the toe, and vaulting over a bar.
4. STRENGTH—emphasizes the capacity of the body, or the hands or legs to exert great force. Strength in its ultimate analysis is a complex human quality involving will power, the number of muscle fibers that can be brought into the act (neurological integration), the efficiency of the levers involved in the act, and the nutritive state of the muscle fibers involved—all to develop coordinated effort against the particular resistance. An important differentiation is that speed and endurance are not primary considerations but only the maximum force capacity is designated as strength.
5. POWER—emphasizes the capacity to release great explosive effort to execute fast or sudden efforts which move the entire body with maximum effort. Physically, power is FORCE x VELOCITY. Both elements must be present in high powered acts. Such physical capacity indicated a neuromuscular integration of a superior type. Events are selected in which highly specialized skill is not a major factor but those which almost everyone knows how to do, such as vertical jumping, ordinary standing broad jumping, running broad jumping, sprinting, and throwing weights.
6. ENDURANCE — emphasizes capacity for continuous exertion with partial recovery during the exercise. Undoubtedly, there are several types of endurance which have a large proportion of uniqueness unto themselves, such as:
   (a) Nervous endurance — emotional stability under mental strain, worry, fear, or disaster.

(b) Static muscular endurance.
(c) Rhythmic dynamic endurance.
(d) Endurance in acts of power.
(e) Long durability under monotonous work, lack of sleep, food, water, or rest—Continued for days, weeks, or months.
(f) Specialized types of endurance specific to particular sports.

Motor fitness education and conditioning—A systematic introduction to activities of balance, flexibility, agility, strength, power and endurance with emphasis on *physical fitness* would seem to be of great value in the scheme of physical education offerings. An exercise routine of (1) Light rhythmic stretching exercises, (2) Breath holding, (3) Heavier Danish trunk exercises, (4) Balance exercises with deep breathing and breath holding, (5) Agility stunts, (6) Jumping and power exercises, (7) Endurance running, Swimming, Weight lifting, Pulley weight exercises, Medicine ball throwing—all combine into a vigorous workout of great value for body building and conditioning. Beginning with a workout of thirty minutes, increasing this gradually to an hour, and even in the final stages to as much as two hours with more endurance work in longer hikes, runs, swims, or combination endurance work —gives a progression which should bring results. In the early stages of such a program, measurements should be made of the six fundamental aspects of dynamic fitness. In addition a few body dimensions need to be taken and sufficient classification data to physically describe the individual. Improvement may be noted by repeating those tests at intervals of two to three months. These measurements and individual consultation on them makes the work of personal value and interest to every individual. Each person has an individual folder. Test sheets are put in this folder. Individuals are taught to post their own sheets and follow their own progress. Informally, they may repeat the tests shown them on their own, self-testing, which is in itself a good type of practice. Perhaps, every department of Health and Physical Education should hold a foremost objective to see that every person receives education in this area for the purpose of understanding the body and its developmental and conditioning possibilities. What is of greater value than to know *how* to keep the body in condition?

University of Illinois

INVENTORY OF MOTOR FITNESS

Name ..... Local Address: .....

Age ..... Height ..... Weight ..... Body Type Number ..... Name .....

P. E. Course: ..... P. E. Instructor: .....

.....

PHASES TESTED	ALLOTTED POINTS	TRIALS									
		First		Second		Third		Fourth		Fifth	
	Dates	Score	%	Score	%	Score	%	Score	%	Score	%
I. BALANCE	100										
II. FLEXIBILITY	100										
III. AGILITY	100										
IV. STRENGTH	200										
V. POWER	200										
VI. ENDURANCE	300										
TOTAL	1,000										

NOTE. This inventory samples the six fundamental areas of emphasis in motor fitness. The five items chosen to represent each phase were selected after practical experimentation with a large number of items and after review of the evidence in all of the recent studies in the motor ability field. No completely adequate criterion of motor fitness exists, as the composite criterion is affected at once by the items included and is therefore biased in terms of what may be feasible to administer and in terms of what the experimenter thinks is important. The validity of the items and the weightings given to the tests or groups by statistical weighting from factor analysis or multiple regression analysis hinge on the type of criterion selected. Such a statistical scheme is held inadequate to weight the sections of this inventory. The full battery may in itself be used as a criterion for the validation of shorter batteries. Since the national emergency has put emphasis on physical fitness, strength and power and endurance in

physical activity are important aspects of human capacity. They are weighted arbitrarily 700 points out of the 1,000 total possible. Neglect of balance, flexibility, and agility is not sensible in view of the many types of conditioning exercises and drills available in each of these areas. Five stunts have been selected to represent each area with consideration to simplicity of administration, graduated difficulty, the use of a minimum of equipment, and a time limitation of three one-hour periods. Sections I, II, and III are administered in one period; sections IV and V in another period; and section VI in a third period. Improvement may be noted on successive trials at intervals of two month or semesters.

Name..... Date.....

University of Illinois—Physical Fitness Clinic

INVENTORY OF DYNAMIC ASPECTS OF PHYSICAL FITNESS—BALANCE (100 Pts.)

INSTRUCTIONS: Take the battery of five tests under the supervision of a partner or instructor. Post the results in the spaces below corresponding to the date on which the test is taken. Three trials are allowed if necessary to pass each item. Insert the points earned in the parenthesis. When all five items have been scored by ringing "Pass", "Fail", according to the performance, add the points earned to determine the total score. Calculate the per cent efficiency.

Name of Item	Points Allotted	Specifications For Standards	Trials 1	2	3	4
			Dates			
1. DOUBLE KNEEL Stand with feet about six inches apart and arms clasped behind back. Kneel slowly, touch both knees to floor and get up.	10 (2.87% Failure)	Feet must be held in place throughout without shifting and arms kept behind back.	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )
2. DIVER'S STANCE (EYES CLOSED) Stand on toes with heels together; hold hands horizontally forward.	15 (3.45% Failure)	Hold for 20 seconds without shifting feet or hands	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )
3. FOOT AND TOE BALANCE (EYES OPEN) With hands free to aid, stand flat on one foot, then rise on toe. Free foot held forward.	20 (9.78% Failure)	Start on either foot, hold 10 sec. flat-footed and 10 sec. on toes. Weighted foot must not shift.	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )
4. FROG STAND Squat with arms between knees and hands on floor in front of toes. Rock forward to balance on hands.	25 (52.30% Failure)	Hold balance 10 sec. without touching floor with feet, head, or losing position.	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )
5. HANDSTAND OR WALK Throw legs up to handstand.	30 (95.40% Failure)	Hold balance or walk position 10 seconds.	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )
Transfer these results to the master sheet for summary.						
		Total Points Earned				
		Per Cent Efficiency				

Name..... Date.....

University of Illinois—Physical Fitness Clinic

INVENTORY OF MOTOR FITNESS—FLEXIBILITY (100 Pts.)

INSTRUCTIONS: Take the battery of five tests under the supervision of a partner or instructor. Post the results in the spaces below corresponding to the date on which the test is taken. Three trials are allowed if necessary to pass each item. Insert the points earned in the parenthesis. When all five items have been scored by ringing "Pass", "Fail", according to the performance, add the points earned to determine the total score. Calculate the per cent efficiency.

Name of Item	Points Allotted	Specifications For Standards	Trials 1	2	3	4
			Dates			
1. TRUNK EXTENSION, BACKWARD, Lying face downward on floor, fingers placed behind neck, partner holding feet and hips down, extend back.	10 (2.88% Failure)	Raise chin 18″ off floor. (two groups of two's work together.)	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )
2. STRAIGHT-KNEE FLOOR TOUCH, From standing position, bend forward from waist and touch floor.	15 (11.5% Failure)	With feet 12″ apart, touch floor with finger tips, keeping knees straight throughout.	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )
3. TRUNK FLEXION, FORWARD, Sitting position, legs straight with heels 18″ apart, fingers laced behind neck.	20 (18.39% Failure)	Bend trunk forward until forehead is 6″ from floor, knees straight throughout.	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )
4. STRAIGHT-ARM LIFT, Lying face downward on floor, arms extended straight overhead with fists clenched, raise arms a maximum distance.	25 (24.7% Failure)	Lift both fists 18″ off floor, keeping chin to floor.	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )
5. VITAL CAPACITY, Sitting, trunk upright, facing wet spirometer, chest and abdomen free. Take maximum inhalation, blow into the spirometer. Note temperature in C. Corrected Vital Capacity equal to predicted Vital Capacity for Surface Area. (Boothby-Sandiford Nomogram) or equal to average vital capacity for man of same size.	.....	Predicted V. C. (Cu. ins.) = 309 (S. A.) —273. Actual V. C. = Corrected V. C. = (McCloy Tables to 37 C.) Difference (Residual) = Actual — Predicted V. C. = Pass = + Residuals Fail = — Residuals	Pass Fail .... ( )	Pass Fail .... ( )	Pass Fail .... ( )	Pass Fail .... ( )
		Total Points Earned Per Cent Efficiency				

Name..... Date.....

University of Illinois—Physical Fitness Clinic

INVENTORY OF DYNAMIC ASPECTS OF PHYSICAL FITNESS—AGILITY (100 Pts.)

INSTRUCTIONS: Take the battery of five tests under the supervision of a partner or instructor. Post the results in the spaces below corresponding to the dates on which the test is taken. Three trials are allowed if necessary to pass each item. Insert the points earned in the parenthesis. When all five items have been scored by ringing "Pass", "Fail", according to the performance, add the points earned to determine the total score. Calculate the per cent efficiency.

Name of Item	Points Allotted	Specifications For Standards	Trials 1	2	3	4
			Dates			
1. KNEELING JUMP, From kneeling position with bottoms of feet up, arms held forward from shoulders, swing arms and jump to feet.	10 (13.22% Failures)	Swing arms downward and then vigorously upward, springing to the feet, landing firmly on the bottoms of both.	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )
2. RUNNING FORWARD DIVE AND ROLL, Run up to the end of a mat and execute a long dive, landing on the hands, then finish with a forward roll.	15 (32.20% Failure)	Clear five feet in the long dive from the point of take-off to the place where the hands land.	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )
3. AGILITY RUN, Run back and forth between two lines 30 feet apart, touching each and completing three round trips, then loop bases corresponding to 1st and 3rd bases, 30 feet apart.	20 (35.10% Failure)	Start and finish 22.5 sec.	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )
4. JUMP STICK, Holding a stick with hands about 18" apart, (or hold toe and jump through the loop.)	25 (39.10% Failure)	Jump over stick (or foot) forward without releasing stick (or foot).	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )
5. BAR VAULT, Facing bar, holding with both hands, vault over without touching bar with body.	30 (54% Failure)	Bar at shoulder height. Feet together or apart. Clear bar in continuous move.	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )

Total Points Earned
Per Cent Efficiency

Name..... Date.....

University of Illinois—Physical Fitness Clinic

INVENTORY OF DYNAMIC ASPECTS OF PHYSICAL FITNESS—STRENGTH (200 Pts.)

INSTRUCTIONS: Take the battery of five tests under the supervision of a partner or instructor. Post the results in the spaces below corresponding to the dates on which the test is taken. Three trials are allowed if necessary to pass each item. Insert the points earned in the parenthesis. When all five items have been scored by ringing "Pass", "Fail", according to the performance, add the points earned to determine the total score. Calculate the per cent efficiency.

Name of Item	Points Allotted	Specifications For Standards	Trials 1	2	3	4
		Dates	Pass	Pass	Pass	Pass
1. NECK BRIDGE, Lie on back, hands on thighs, push up to neck bridge.	10 (3.45% Failure)	Hold neck bridge, with support from top of head, 60 seconds.	Fail	Fail	Fail	Fail
			( )	( )	( )	( )
2. WEIGHT LIFT: Continuous combination of: Back lift, Curl, Overhead lift, One knee touch and Rise. Lower to floor. ALTERNATE: Lift man (± 165) from back lying position to shoulders and lower to floor carefully.	25 (13.22% Failure)	Lift 60 lb. barbell in the series of exercises. Five times.	Pass	Pass	Pass	Pass
			Fail	Fail	Fail	Fail
			( )	( )	( )	( )
3. SIT-UPS AND LEG LIFTS: Lying position on back, fingers laced behind neck, lift legs to vertical then lift body to sit-up position, keeping feet on floor.	40 (21.82% Failure)	20 leg raisings with legs straight, and immediately 20 sit-ups with legs straight. No rest between.	Pass	Pass	Pass	Pass
			Fail	Fail	Fail	Fail
			( )	( )	( )	( )
4. DYNAMOMETRICAL STRENGTH TESTS: Sum of R. and L. Hand-Grips, plus Back Lift, plus Leg lift.	50 (48.30% Failure)	Total required: 825 lbs. R. + L. Hand Grip= Back Lift= Leg Lift= Total=	Pass	Pass	Pass	Pass
			Fail	Fail	Fail	Fail
			( )	( )	( )	( )
5. FULL EXTENSION BODY PRESS-UP Lying on front, arms extended straight upward from shoulders.	(78.20% Failure) 25 50 75	Press body up, lifting stomach 4" off floor. Once (25 points) Twice (50 points) Three times (75 pts.)	Pass	Pass	Pass	Pass
			Fail	Fail	Fail	Fail
			( )	( )	( )	( )
		Total Points Earned				
		Per Cent Efficiency				

Name..... Date.....

University of Illinois—Physical Fitness Clinic

INVENTORY OF DYNAMIC ASPECTS OF PHYSICAL FITNESS—POWER (200 Pts.)

INSTRUCTIONS: Take the battery of five tests under the supervision of a partner or instructor. Post the results in the spaces below corresponding to the dates on which the test is taken. Three trials are allowed if necessary to pass each item. Insert the points earned in the parenthesis. When all five items have been scored by ringing "Pass", "Fail", according to the performance, add the points earned to determine the total score. Calculate the per cent efficiency.

Name of Item	Points Allotted	Specification For Standards	Trials 1	2	3	4
		Dates Result:				
1. STANDING BROAD JUMP	10 (37.25% Failure)	6'-2"	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )
2. MEDICINE BALL PUT (ONE ARM)	25 (43.20% Failure)	7 lb. Ball 34 Feet	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )
3. ROPE CLIMB 20 Feet	40 (56.90% Failure)	Using hands and feet, 16 sec.	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )
4. VERTICAL JUMP	50 (61.50% Failure)	19 Inches	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )
5. SPRINT RUN (Indoors)	75 (68.50% Failure)	On circular indoor track, 100 Yards, 14.3 sec.	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )
		Total Points Earned				
		Per Cent Efficiency				

Name..... Date.....

University of Illinois—Physical Fitness Clinic

INVENTORY OF DYNAMIC ASPECTS OF PHYSICAL FITNESS—ENDURANCE (300 Pts.)

INSTRUCTIONS: Take the battery of five tests under the supervision of a partner or instructor. Post the results in the spaces below corresponding to the dates on which the test is taken. Three trials are allowed if necessary to pass each item. Insert the points earned in the parenthesis. When all five items have been scored by ringing "Pass", "Fail", according to the performance, add the points earned to determine the total score. Calculate the per cent efficiency.

Name of Item	Points Allotted	Specifications For Standards	Trials 1	2	3	4
		Dates				
1. BREATH HOLDING AFTER EXERCISE	25 (32.20% Failure)	Running in place for 60 seconds at 180 steps per minute, three deep breaths and hold breath 30 seconds	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )
2. SITTING HALF LEVER: Sitting, with hands on floor at hips, hold legs rigidly straight and off floor.	40 (32.20% Failure)	60 seconds	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )
3. PARALLEL BAR DIPS	60 (54.60% Failure)	8 Times	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )
4. CHINNING THE BAR	75 (67.80% Failure)	8 Times	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )
5. RUNNING ENDURANCE	50 (46% Failure)	Running a mile on indoor track, 7 min.	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )
SWIMMING ENDURANCE	50 (72.50% Failure)	Swimming 440 Yards, continuously. Accept word if pool is not available.	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )	Pass Fail ( )
		Total Points Earned				
		Per Cent Efficiency				

Performance Scores on the Inventory of Motor Fitness

The fundamental purpose of the criterion battery is to *differentiate ability* in the several areas of emphasis in motor fitness. In addition, the battery shows the performance results in each of the areas of balance, flexibility, agility, strength, power and endurance. In each area of emphasis there are relatively easy, medium, and relatively more difficult items which permit differentiation in ability. Administering the items on a "Pass" or "Fail" plan makes possible the testing of more items, and, hence, the sampling of a wider range of ability than would otherwise be possible.

Since the major problem is to provide a performance battery for university men students below average* in motor fitness, the INVENTORY is standardized on 171 members of the Physical Fitness Clinic, at the University of Illinois, with the following results:

	Total Scores	f	Percentiles	Decile Values	Percentile Range
	950-1000	0	100	1000	
	900- 949	1			
	850- 899	3			
	800- 849	9			
Excellent	750- 799	5	90	750	90-100
	700- 749	9			
Good	650- 699	17	80	651	80- 89
	600- 649	11	70	600	
Fair	550- 599	14	60	550	60- 79
	500- 549	24	50	502	
Average	450- 499	18	40	452	40- 59
	400- 449	23	30	406	
Poor	350- 399	16	20	356	20- 39
	300- 349	7	10	301	
	250- 299	5			
	200- 249	5			
	150- 199	3			
	100- 149	0			
	50- 99	1			
Very Poor	0- 49	0	0	0	0- 19

Mean = 526.75
σ = 167
N = 171

* Any student who scored 800 points or above on this battery was "graduated" from the physical Fitness Clinic.

Physical Fitness Clinic

Illinois Inventory of Dynamic Aspects of Physical Fitness

Group Emphasis	Group Points	Item	% Failures	Points
I. BALANCE	100	Double Kneel	2.87%	10
		Diver's Stance	3.45%	15
		Foot and Toe	9.78%	20
		Frog Stand	52.30%	25
		Handstand or Walk on Hands	95.40%	30
		Whole Group	32.75%	100
II. FLEXIBILITY	100	Trunk Extension	2.88%	10
		Floor Touch	11.50%	15
		Trunk Flexion	18.39%	20
		Straight-arm Lift	24.70%	25
		Vital Capacity	67.70%	30
		Whole Group	47.95%	100

III. AGILITY	100	Kneeling Jump	13.22%	10
		Dive and Roll	32.20%	15
		Agility Run	35.10%	20
		Jump Stick	39.10%	25
		Bar Vault	54.00%	30
		Whole Group	32.40%	100
IV. STRENGTH	200	Neck Bridge	3.45%	10
		Weight Lift	13.22%	25
		Sit-ups and Leg Lifts	21.82%	40
		Dynamometer Strength	48.30%	50
		Extended Press-up	78.20%	75
		Whole Group	21.50%	200
V. POWER	200	Standing Broad Jump	37.35%	10
		Medicine Ball Put	43.20%	25
		Rope Climb	56.90%	40
		Vertical Jump	61.50%	50
		Sprint Run	68.50%	75
		Whole Group	53.50%	200
VI. ENDURANCE	300	Breath Holding After Exercise	32.20%	25
		Sitting Half Lever	32.20%	40
		Parallel Bar Dips	54.60%	60
		Chinning the Bar	67.80%	75
		Mile Run	46.00%	50
		440-Yard Swim	72.50%	50
		Whole Group	50.90%	300
		Total Group Points		1000

Validity of Items in the Inventory of Motor Fitness

Items	Passing Standard	Group Emphasis	Validity "bis"	Two Best Items From Each Group
1. Running Forward Dive and Roll	5 ft.	Agility	.482	* (1) Agility
2. Frog Stand	10 sec.	Balance	.453	* (1) Balance
3. Chinning	8 times	Endurance	.443	* (1) Endurance
4. Bar Vault	4′ 6″	Agility	.436	* (2) Agility
5. Running a Mile	7:00	Endurance	.430	* (2) Endurance
6. Leg Lifts and Sit-ups	20 each	Strength	.411	* (1) Strength
7. Dipping on Bars	8 times	Endurance	.390	
8. Medicine Ball Put	6 lb.—36 ft.	Power	.381	* (1) Power
9. Balance Foot and Toe	10 sec. each	Balance	.377	* (2) Balance
10. Extension Press-up	once—4″	Strength	.372	* (2) Strength
11. Sitting Half-Lever	60 sec.	Endurance	.339	
12. Agility Run	22.5 sec.	Agility	.334	
13. Dynamometrical Strength	850 lbs.	Strength	.330	
14. Breath Holding after Exercise	30 sec.	Endurance	.301	
15. Standing Broad Jump	6′ 6″	Power	.277	* (2) Power

16.	Bar Bell Lift or Man Lift	60 lbs.	Strength	.259	
17.	Kneeling Jump	Jump to Feet	Agility	.251	
18.	Handstand	10 sec.	Balance	.233	
19.	Rope Climb	20 ft. in 16 sec.	Power	.222	
20.	Vertical Jump	19 ins.	Power	.220	
21.	Sprint Run, 100 Yds.	14.3 sec.	Power	.214	
22.	Jump Stick	Forward or backward, once	Agility	.205	
23.	Trunk Extension	12 ins.	Flexibility	.200	* (1) Flexibility
24.	Vital Capacity Residuals	+ residual	Flexibility	.193	
25.	Neck Bridge	Push-up and Hold 60 sec.	Strength	.190	
26.	Trunk Flexion	12 ins.	Flexibility	.184	* (2) Flexibility
27.	Swimming 440 Yds.	Any stroke, Continuously	Endurance	.154	
28.	Straight-Knee Floor Touch	Touch with fingertips.	Flexibility	.141	
29.	Double Kneel	Hold position and balance	Balance	.138	
30.	Straight-arm Lift	12 ins.	Flexibility	.069	
31.	Diver's Stance	20 sec. on toes	Balance	.001	

Most Valid Items in Each Group

Group	Best	2nd. Best	3rd. Best
Balance	Frog Stand	Foot and Toe	Handstand
Flexibility	Trunk Extension	Vital Capacity Residuals	Trunk Flexion
Agility	Dive and Roll	Bar Vault	Agility Run
Strength	Extension Press-up	Dynamometer Strength	Weight Lift
Power	Medicine Ball Put	Standing Broad Jump	Rope Climb
Endurance	Chinning	Running a Mile	Leg Lifts and Sit-ups

The screen test which has been arranged is on the basis of this evidence and logic. This test has served as a helpful instrument to differentiate the poorer male students in motor fitness from those of relatively greater ability.

SCHOOL HEALTH SERVICE

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Introduction

In the last few years there has come into being a new conception of the school's function. Specifically, this function is one of developing the whole individual for a richer, healthier, and more nearly complete life. The purpose of the school health program correlates with the educational philosophy of our schools. The general purpose of the modern school health program is to secure "the highest attainable health of mind, body, and personality of every school child."[1]

The trend of health service in the schools. Historically, in America, school health work is barely more than a quarter of a century old. In such a short time one could not expect complete agreement in regard to practices and procedures. Especially is this true in the smaller and less progressive communities. In one community the teaching of hygiene is of paramount importance. In

[1] Symonds, Percival M., *Mental Hygiene of the School Child.* (New York: The Macmillan Company, 1936), p. 28.

another community medical inspection is the major interest. In still another community, the physical education program with its large muscle activity is of prime importance. In some places, the school nurse constitutes the school health program with little help from other members of the staff.

In seeking an explanation for this situation one might ask the following questions. Is the objective sought one of universal agreement? Has the objective been interpreted to have a common meaning? Is there unanimity of opinion in regard to curriculum content? Where in the curriculum does the school health service belong? How does the community regard the school health program?

With the topic of school health service defined in the light of modern educational interpretation, a health service which was originally a necessary procedure to eliminate as far as possible, communicable diseases, has been transformed fairly recently, into a thorough, responsible, remedial process. Medical inspection was introduced into the schools in response to a demand for control of communicable diseases. Gradually the scope of service widened to assume responsibility for the detection of other health abnormalities.

Legislation pertaining to school health service. A number of states have enacted laws providing complete physical examination by a physician. This is an established procedure in most large cities. This procedure is an outgrowth of a practice which started about 1890 in an effort to control and prevent epidemics of communicable diseases. Between 1903 and 1925, twenty-three states passed mandatory laws relating to medical inspection of school children. A number of other states have modified mandatory laws. However, the wide range in regard to the specifications of these laws would indicate a lack of agreement on objectives sought. In three states the examinations of school children are limited to those of sight and hearing; one limits the examination to sight, hearing, and chest; another adds dental examination to the previously mentioned three. In fifteen states a more general type of examination is specified.

It is important that all states have compulsory laws regarding immunization to communicable diseases since approximately 80 per cent of all school absences are caused by this type of disease. Absences increase the cost of education, therefore, continuous attendance of all school children is an ideal to be sought. In localities where immunization to these diseases is not made compulsory by law, the school must take the responsibility of accomplishing it through educative forces. Statistics show that diphtheria practically disappears from the community when 50 to 75 per cent of the children have been immunized.

THE MODERN SCHOOL HEALTH PROGRAM

Those who have given thought to and experimented with health service in the schools[2] have suggested that the school health program be divided into four separate, although coordinating units, namely:

1. Health service.
2. Health instruction.
3. Healthful school living.
4. Physical and health education.

Health service. In its broad sense, the health service comprises the various administrative procedures which are needed to determine the health status of the child. Its ramifications extend to inform the parents of the child's defects, to aid teachers in the recognition of the early onset of disease or defect, and to assist in the correction of remedial defects. In addition it should coordinate with the health instruction of the school child.

When a child first enters school he is given a medical examination. During the examination the nurse plays an important role by assisting not only in a medical manner, but by the use of her knowledge of human behavior and psychology. It is most important that she be possessed of patience and a sympathetic attitude. She should be a graduate, registered nurse with experience in pediatrics and public health nursing. The school physician must try in a soothing and diplomatic way to dispel any unpleasant influence which may exist, and at the same time make the parent and child feel themselves surrounded by an atmosphere of good will. He must be gentle, understanding, and congenial, as he follows established or adapted techniques to the best of his ability.

Health instruction. Health instruction may be only a few words spoken by the examining physician or it may be an extensive program carried on through the several school departments cooperating with the school nurse. There is no longer a question as to the wisdom of giving health a regular and prominent place on the program of the school since a committee of the National Education Association, in drawing up a specific set of objectives for education, placed health first on the list.[3] There are many problems to be solved before health instruction becomes a universal success in the program. The greatest problem is the motivation of the child to use the knowledge obtained

[2] Terman, Lewis M., and Almack, John C., *The Hygiene of the School Child.* (Boston: Houghton Mifflin Company, 1929).
Turner, Clair E., *Principles of Health Education.* (Boston: D. C. Heath and Company, 1939).
Williams, Jesse Feiring, and Brownell, Clifford, *Administration of Health and Physical Education.* (Philadelphia: W. B. Saunders Company, 1934).

[3] "A Report of the Committee for the Reorganization of Secondary Education." *National Education Association,* Proceedings of the 59th Annual Meeting, Vol. 59, 1921. p. 155.

in class for his own personal benefit. An apt statement regarding this problem appeared recently in an editorial in the weekly bulletin of the California Department of Public Health to the effect that:

> Knowledge about health is useless to the individual, unless he uses that knowledge to build better health habits for himself, or for those with whom he comes in contact. In health it is not what we know, but what we do that counts. Health knowledge is quite useless unless it modifies advantageously a person's habits and procedures. In the field of health we have had and still have, too much of doing things for or to people instead of training and educating them to do things for themselves.[4]

It is obvious that the results in health instruction depend upon the practice of the principles of health by the individual.

Healthful school living. Healthful school living depends on the school environment from the hygienic and sanitary point of view together with that of the parent-pupil-teacher relationship. School environment has not received the widespread attention that it should. In regard to some practices no standards have been set up. In regard to others standards have been set up by legislative enactments so long ago that they are now antiquated in the light of modern scientific facts. The parent-pupil-teacher relationship is one in which the parent and teacher alike must be educated to the necessity of providing the child with the best possible health conditions under the prevailing circumstances. Many of us have entered a classroom in winter to find all the windows locked and the children sitting at their desks with their rubbers on their feet. This practice is more prevalent in eastern and middle western schools. However, our western schools also have examples of gross neglect of health principles.

Physical and health education. No longer are departments of physical education known as such, but rather as departments of Physical and Health Education. Their reason for being has become clearer in the minds of the people as a most necessary adjunct to health. This has come about as our conception of education has enlarged to include for the child a more wholesome and more nearly complete life. As Dr. Rogers explains it, "Physical education is not a subject but a method, which is a proper and essential educational tool for every teacher."[5]

[4] Weekly Bulletin, *California Department of Public Health*, December 24, 1938.

[5] Rogers, Frederick Rand, *Educational Objectives of Physical Activity.* (New York: A. S. Barnes and Company, 1929), p. 51.

CURRENT PROBLEMS

There are a number of current problems relative to the school health service which will be taken up in the form of questions and answers.

Administrative responsibility for health service. Whose administrative responsibility is it to see that the health service program is carried into effect? When Phillips Andover in Massachusetts was started, the charter of gift gave the following quotation as its reason for being, "To learn the great end and the big business of living." Our forefathers saw the necessity for public education although it was not without a long and bitter struggle that they accomplished their purpose. Even before that time the Romans and Greeks realized the necessity for health when they said, "Mens sana in corpore sano." "A sound mind in a sound body." Yet we have been retarded in providing the opportunity for health to our children. This retardation has been due primarily to the objection that the responsibility for the child's health belongs in the home. If we felt the same way about education, some children would receive proper training; others would be illiterate. If the benefits of present day knowledge in health were extended to insure the healthy development of children we would not have the appalling facts and figures brought out by the World War draft in 1917 and again in the present draft statistics. The problem must be met through mutual interests and organized efforts. Organized education can do it more efficiently than the home. The school must, and undoubtedly will accept such responsibilities as it may be charged with by the state.

Purposes of examinations. What are the purposes of examinations? School health service today is far removed from the routine medical inspection of some years ago. Particularly is this true in large metropolitan areas. Pupils, parents, physicians, nurses, dentists, hygienists and other health specialists, as well as school administrators and teachers, cooperate in the varied activities of school health work. The work done with the majority of boys and girls is chiefly preventive. For the child who is physically below standard or poorly adjusted mentally or emotionally, it means a careful study of his individual health problems and advice to parents concerning treatment.

Extent of program. How far may the school go in its remedial and first aid program? School health service is the term employed to include: a. those things which we do for the child to protect his health; b. individual health teaching; c. education of the parent in child health, home and community hygiene and parental responsibility. Accordingly, treatment by school authorities is given only under certain special conditions. First aid is offered in cases of accident or sudden illness at school. In some systems treatment of minor

injuries and illnesses for which a family physician would not be employed but which interfere with school attendance is given. Clinics, maintained by public health agencies, city and county agencies, and charitable societies care for the correction of defects of teeth and eyes of indigent children. Tonsillectomies, orthopedic surgery, x-ray examinations, bacteriological tests, and other corrective and diagnostic work may be obtained through these same agencies upon recommendation from the school physician or nurse.

Professional ethics. What are the professional ethics involved in this remedial program? Professional health service in the schools is an organized procedure for inspecting and examining children to determine their condition, and to aid in remedial measures. The health service is of little value unless the defects observed can be brought under proper medical and remedial care. The idea that the school physician should determine the defect while the parent should be responsible for its correction has led to excessive examination with very little correction. The highly publicized ethics of the medical profession have resulted in the school physician's refraining from attempts at correction. Most school children are under the direct care of a family physician and any attempt on the part of the school physician to correct defects, though he may be the first to recognize their existence, is considered a violation of medical ethics.

Function of the teacher. What is the function of the teacher in health service? The teacher is a very important cog in the wheel of health service. She occupies a strategic position because of her contact with the child every day, and if she is alert and well informed she may be able to detect any deviation from the normal. The teacher observes in a general way the physical condition of each child as he enters the classroom in the morning. This gives the teacher some knowledge as to the health habits of the child together with a background of environmental conditions. The physician can easily inform the teacher of the abnormality that may exist in the child, and she in turn can direct her attention to assuring the correction of the defect. In addition, the teacher may be present and help the physician at the regular examination of the child.

SUMMARY

Conclusions. One may conclude from the current material available that the following trends are indicative of a much wider scope for the health service program than was heretofore believed necessary or possible.

1. For the first time, the purpose of the school health program correlates with the educational philosophy of the schools.
2. The objective is being interpreted to have a common meaning.
3. There is unanimity of opinion in regard to curriculum content in the large metropolitan areas. Towns and rural sections follow the trend set by the large cities.
4. There is general acceptance of the four divisions of the school health program, namely: health service, health instruction, healthful school living, physical and health education.
5. The National Education Association has not only accepted the necessity for promotion of the school health program but has listed health as the first objective of education.
6. The physician, the school nurse, the supervisor, the principal, and the teacher are the most important contributors toward the realization of an ideal health program.

Moot questions. At the present time there are at least two questions regarding the school health program yet to be answered.

1. What is the place in the curriculum for the health instruction program?
2. How can the community be won over regarding the school health program?

A NEW TEST ELEMENT FOR A NEW EMPHASIS

CAROLYN WEEMS BOOKWALTER, Ed. D.

The recent interest in physical fitness has resulted in more specific goals and in efforts at the determination of their attainment. Several studies, one of which was reported in the previous issue, have indicated a marked weakness of men and women in shoulder girdle strength. The writer hoped to develop a measure of this quality which would not only test one's capacity in this regard but which could also be employed as an activity, developmental of the needed strength. Such a measure should be administrable to both men and women. It must require practically no equipment and must be feasible with large classes. In cooperation with her husband and the Men's and the Women's Departments of Physical Education at Indiana University the following measure has been developed:

MODIFIED OR ANGLE CHINNING

Informally size the class and then form in pairs whose weights are within five pounds of each other. Number the partners. Numbers one lie on their backs with arms sideward on the floor, shoulder level, and with the forearms bent to vertical. Numbers two stand astride ones and facing them. Twos place their toes *just outside of and touching the elbows of ones.* Partners hold hands *with bent finger grip.* Twos keep their legs, back, and arms straight

at all times. Ones chin upward with head, back, and legs in a straight line, until their sides meet *firm* resistance with their partners' thighs. Continue as long as possible. Partners count out loud. Partners then reverse and twos chin. In case girls are chinning it has been found necessary to hold Kleenex, handkerchiefs, or towels in the hands in order to prevent injury from excessively long finger nails. Wands or broomsticks have been proposed but it seems desirable to keep equipment at an irreducible minimum. The hand grip is also a bit more flexible than is the wand.

WHAT HIGH SCHOOL STUDENTS KNOW, THINK, AND DO ABOUT HEALTH

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A recent investigation of what high school students know, think, and do about health revealed many interesting findings—some generally recognized, others not so well known or, perhaps, disregarded in the school health program. The purpose of this study, which involved 2,415 pupils from thirteen junior and senior high schools of Los Angeles, was to determine the amount and nature of the health knowledge, attitude, status, and practices of high school pupils and to find out what relationships existed between these factors. For purposes of comparison an analysis was made of the differences in these variables when the students were grouped according to school, grade, age, sex, course of study followed, occupation of father, and race.

To obtain this information a measuring instrument was constructed which consisted of a questionnaire to determine the stated health status and practice of high school pupils; a health knowledge test made up of sixty-nine multiple choice items taken from authoritative sources; and an attitude scale designed to determine the nature of attitudes held toward certain health practices. This instrument was called the High School Health Inventory.

Some of the findings of this study stated in summary form are as follows:

1. In general, pupils from schools with an average or higher intelligence level, with few Mexican, Negro, and Oriental pupils, and with a relatively high socio-economic level scored above the others in all four health factors studied.

2. While the pupils who were older and in higher grades tended to be superior in health knowledge and endorsed more favorable health attitudes, they appraised their own health status and practices as inferior to what pupils younger and in the lower grades appraised theirs to be.

3. There was little difference between boys' and girls' health status and practice scores, but girls were superior to boys in health knowledge and attitude with differences that were statistically significant.

4. Pupils enrolled in academic and commercial courses ranked above pupils enrolled in industrial arts and home economics courses on the basis of health practice, knowledge and attitude. Industrial arts pupils ranked highest in health status. Significant differences were present only in the superiority of the academic and commercial pupils to the industrial arts and home economics pupils in health practice, the academic pupils to all other groups in health attitude.

5. Pupils whose fathers were in professional and managerial occupations ranked consistently higher in all four health factors than pupils whose fathers were in the so-called lower-level occupational classifications. Statistically significant differences were found only in comparisons between the highest ranking and the lowest ranking groups on the basis of health practice, knowledge and attitude.

6. In general, White pupils scored higher than the other racial groups on the basis of the four health factors. It appeared that the higher average intelligence of the group tested accounted largely for the superiority of the White group over the Mexican, Negro, and Oriental groups in health knowledge. There appeared, moreover, to be a tendency for the White pupils to score highest in practices which would be affected by economic status and social standards in the home.

7. There was found to be only slight positive correlation between the health knowledge and attitude of pupils and the stated health status and practice of pupils.

When all the findings of this health study were examined there appeared certain implications important for the school health program. Of special significance was the complete lack of relationship between what pupils knew and thought about health and what they did about it. The amount of their health knowledge and the nature of their attitude toward certain health practices seemed to have little or no effect upon the type of health habits which these pupils indicated they practiced or the condition of their health as they appraised it. This situation was clearly demonstrated in the relative ranking of pupils, when classified according to schools, racial groups, and occupational status. Further corroboration was provided in the very low correlations which existed among the so-called men-

tal factors (knowledge and attitude). This lack of relationship between knowledge and practice or between lip service and behavior is not new to educators or to others interested in developing citizenship, character, and high social standards, but the implications for those interested in improving the health of young people are important. It is evident that health education programs to be effective should be directed more definitely to health services, to influencing actual behavior, and to a program which reaches the parents.

In the case of health knowledge and health attitude it was found that there was a definite tendency for the older pupils and the pupils in higher grades to excel the younger pupils and those in the lower grades. However, when these same age-groups and grade-groups were compared on the basis of health status and health practice, it was found that the younger pupils excelled the older pupils. In other words, on the basis of the health inventory employed in the present investigation, it was apparent that health knowledge and health attitude of high school pupils were better in the higher than in the lower grades, while at the same time the state of health of these pupils was poorer and their health habits or practices were less desirable. It would seem from these findings that pupils do learn facts about health and do learn the importance and worthwhileness of following certain health practices, as a result of their contact with the school program and their contact with other environmental agencies, such as the home. Yet they do not use their increased knowledge and their improved attitude to better their health condition or their health practices. An obvious conclusion is that the type of health program employed in the school is not sufficiently effective in influencing health behavior.

Furthermore, it would seem that factors other than school influence were important determinants of the type and nature of the pupils' health status, practice, knowledge, and attitude. Thus, when pupils were compared according to racial groups, economic status as measured by occupational level, and course-enrollment, the resulting scores showed a marked tendency for pupils with above-average intelligence, with parents of high occupational status, and with white parents to excel in all four of the health factors under investigation. Conversely, pupils from less economically favored communities, with parents of low occupational status, with below-average mental ability, and with Negro, Mexican, and Oriental parents tended to score low in health status, practice, knowledge, and attitude. It appears logical to assume that home background, socio-economic status, intelligence, and racial heritage contribute to or counteract, as the case may be, the nature or amount of these health factors. Since it is obvious that most health practices are carried on in the home, health instruction, to be effective, must be sufficiently dynamic to influence activities and customs outside the school—especially in the home. In order to compensate negative influences outside the school, the industrial arts and home economics departments, where the majority of pupils enrolled are of average and below socio-economic status and mental ability, should give even greater emphasis to the various phases of the school health program.

The need for increased health services in the secondary schools was indicated by the fact that health condition and health habits were poorer instead of better on the part of pupils who had more health information and were in the higher grades. This extended health service should take the form of more frequent health examinations and increased facilities for the correction of defects. At the time of this investigation it was the practice in Los Angeles schools to examine all pupils in the tenth grade and to re-examine in later secondary school life only those who showed marked defects at the time of examination in the tenth grade. It is obvious from the data revealed in the health practice and status questionnaire that there was need for improvement in all pupils' health condition and habits in the later years of the high school. One of the best opportunities for teaching correct health practices is presented at the time of a health examination. Surely the most effective method of correcting poor health condition is through health examination followed by the proper corrective treatment, supervised by school clinics or a private physician. Health education, like character education or training in democracy, is not effective nor does it function in behavior and attitude, if emphasis is put upon the acquisition of facts and information. Knowledge and reasoning are never automatically carried over into correct behavior. To influence behavior, health education must provide experiences that have meaning and importance to the learner. A very effective means of providing such an experience in learning about health is the health examination, which, if given educational emphasis as well as diagnostic treatment, may well be one of the most important phases of the school health program. Such an examination to be fully effective must have proper follow-up in the form of clinical facilities or proper contact with the home to see that poor health condition or practices are corrected.

The school health program of the future should provide proper knowledge, strong motives, and experience in actual performance in order to counteract the competing interests, the difficulties, and the deficiencies in the environment of pupils. Such a program should include, in addition to the health instructional program, health services including examinations and facilities for correction of defects.

BOOK REVIEWS

Etheredge, Maude Lee, M.D., Dr. Ph. *Health Facts for College Students.* (W. B. Saunders Co., Philadelphia, 1942. pp. xviii, 379.)

Health is an essential condition of order in the human body. Health instruction aims to help one keep himself at his best and to help him consider the health of others through healthful habits. Choice, cooking, preservation, and digestion are vital and involves knowledge of composition as to type of vitamins and minerals in food and the effects of unwise eating.

Mental health concerns the mind and behavior of the person as they relate to adjustment. Maladjustment is caused by fears, worry, frustration, daydreaming, and inferiority feeling. Adequate sleep and rest will aid in overcoming fatigue and in keeping mental health. The nervous system is under great strain these days.

A knowledge of the circulation, bony, and musculatory systems aids one in his work, leisure, and play.

Friendships, love, and preparation for marriage must be understood and desired if they are to be wholesome. Marriage, the home, and parenthood are great experiences but they are real responsibilities requiring real thought and effort. A thorough understanding of the reproductive processes, hereditary processes, and social diseases assures better sex relationships.

Care of eyesight and hearing and avoidance of respiratory diseases is facilitated by basic knowledge of their functions. Proper care of the skin is important.

The functions of the endocrine glands, the action of allergies and effects of smoking, drinking, and narcotics should be understood by all. Cancer and bacteria born diseases can be controlled or prevented by education concerning their cause or communication.

Control of the environment by clothing, heating, and ventilation is made possible to informed people. There is a state and local responsibility to improve health through enactment education and enforcement of health practices. First aid is widely accepted as a public responsibility today.

The text seems to contribute appropriate material, attractively presented, for the college age student.

KARL W. BOOKWALTER.

Williams, Jesse Feiring. *Principles of Physical Education.* Fourth Edition. (Philadelphia: W. B. Saunders Company, 1942. pp. xii, 392. $3.00.)

This book is a complete revision of a text which has gone through four editions. It's basic principles have not been changed. In spite of the permanency of the principles their applications are fitted to encompass the needs of the present emergency and those of peace. This is possible because principles are fundamental beliefs based upon facts, which principles may be used in determining action. The author adheres in this edition to his basic beliefs founded upon facts of anatomy, biology, physiology, embryology, and anthropology.

Modern living, social, industrial, and military present certain hazards. That they are reality is evidenced by draft statistics of both World Wars. Physical education has not just a corrective task—it must primarily be developmental. This text presents the basic facts of the sciences upon which its principles are founded. They should guide our action in meeting the problems above. Psychology, sociology, and biology are screened for their implications. The lessons of the history of physical education are studied to verify our programs and policies. The basic problems of physical education in our democracy, shifting populations, urbanization, sedentarianism, industrialization, delinquency, and antagonistic social and political forces are all analyzed for purpose of orientation.

A program of activities to meet these needs in light of the facts of science, politics, and history is offered. This program is basically the same as that of the former editions. The justifications for each of the phases are presented. The aims and objectives, which are unchanged, are elaborated and explained in a convincing manner as are the facilities necessary to meet these goals with the program proposed.

Methodology which follows sound principles and which may be expected to produce the desired results from the proposed program is generally treated. The need for Tests and Measurements is explained and sound procedures and tests are presented in a limited manner. General standards for judging the outcomes of physical education are finally offered.

Comment: To a person confused by hysterical either-or conflicts, this wealth of sound experience adjusted to a disordered present day situation should be a source of direction and confidence.

KARL W. BOOKWALTER.